AFRICA AND ASIA

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THE EARTH AND ITS PEOPLES

AFRICA AND ASIA

A Geography Textbook for Middle Schools

PART ONE

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UNIT ONE

Earth: The Wanderer

Do you know that you have already gone several times round the sun? Your birth anniversary should remind you how many rounds you have completed so far. But how do you go round the sun? You may not be knowing that the great earth itself is your vehicle. It is difficult to believe the speed at which it moves. Moreover, it is highly punctual. Indeed, this fast-moving vehicle is very safe. So far there has not been a single accident to its discredit. Let us remember that it is a vehicle which belongs to every human being. We have to share it with them all.

The time the earth takes to spin or rotate about itself is known as a day. The time it requires to revolve round the sun is called a year. The rotation and revolution of the earth thus help us in measuring time in days and years. The moon which always 'attends' on our earth helps us in counting months. In fact, the word 'month' means moon.

The poles are the two important points on the earth. With their help a network of imaginary lines is drawn on the earth's globe. This helps us in locating any point on the earth's surface.

Land, water and air are called the three realms of the earth. They are represented by the continents, the oceans and the atmosphere.

In this unit you will be learning several interesting facts. We hope you would raise several questions and also answer them by the time you have gone through these pages.

1. Our Earth and Where it Belongs to

The Terms You Already Know: *Planet*—A heavenly body that revolves round the sun and receives heat and light from it. *Satellite*—A heavenly body which revolves round a planet, just as a planet revolves round the sun *Poles*—The end points of an imaginary axis about which the earth rotates

How pleasant it is to watch the sky—be it dawn, or sunrise or sunset Perhaps it is even more interesting to watch the sky at night. The waning and the waxing of the moon and the twinkling of the countless stars absorb our mind. Even the non-twinkling heavenly bodies, namely, the planets like Venus and Jupiter are no less attractive. The sun, the moon, the stars and other heavenly bodies all belong to the sky. They are, therefore, known as *celestial bodies.* Even the earth we live on is a celestial body.

You already know that the earth is a sphere even though it appears to be flat. It keeps on moving at a tremendous speed. Besides rotating about its imaginary axis it keeps on revolving round the sun. The earth thus being constantly on the move is said to be a *planet.* The word planet means 'a wanderer'.

The Sun and its Family

Our earth, however, is not an aimless or a lonely wanderer. It revolves round the sun along a fixed path known as the *orbit.* The earth has eight other fellow travellers. All of them revolve round the sun and are known as planets. The earth along with the other planets belongs to a family of the sun known as the *Solar System.*

The Sun—The Giver of Heat and Light

The sun is the largest member of the solar system. If we compare the size of the sun to a football, the earth would be less than a pin-head. Every member of the solar system revolves round the sun.

The sun is made up of extremely hot gases. It gives out huge flames. The sun is the only source of heat and light for the entire solar system.

The sun is nearly 150 million kilometres away from the earth. The sun's rays travel at a tremendous speed of about 300,000 kilometres per second. Yet even with this speed they take eight minutes to cover this distance before reaching the earth.

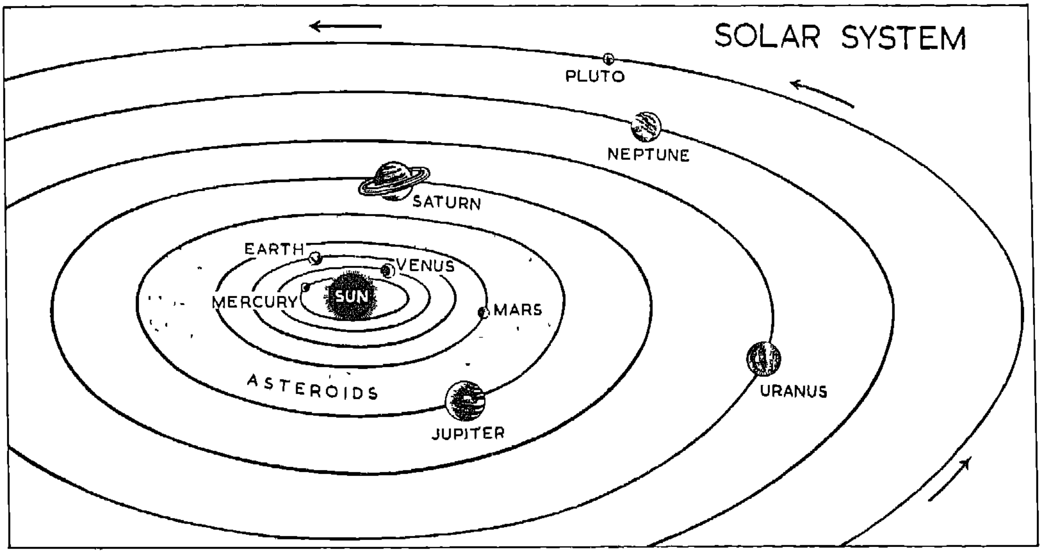


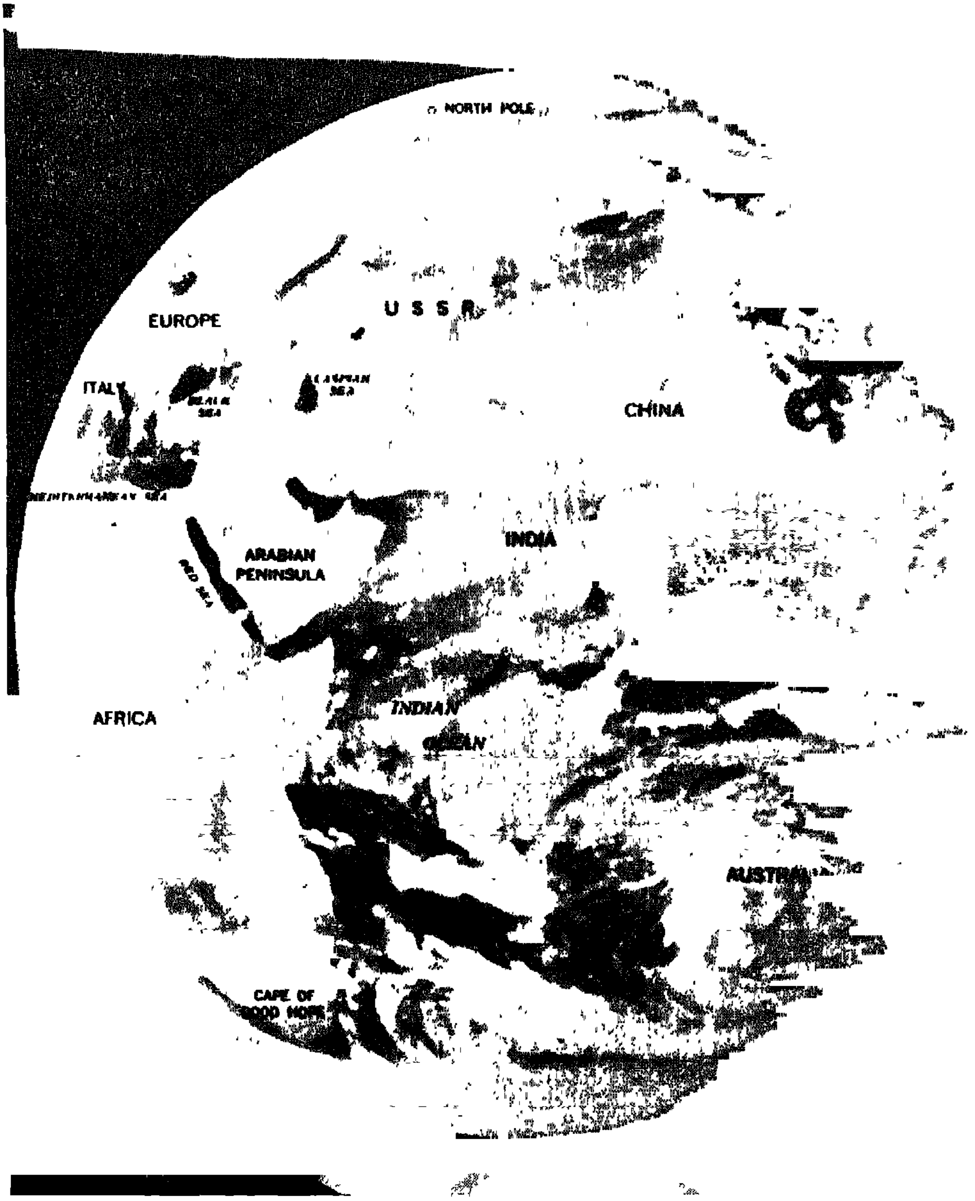
Fig 1. The Sun and the Planets

Note that the orbit of each planet is an elongated circle or an ellipse. Hence, the orbit of each planet is said to be elliptical.

Planets—the Wanderers

Nine planets are the major members of the solar family. In order of their distances from the sun, they are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. Thus Mercury is closest to the sun; and Pluto the farthest of the known planets. Jupiter is the largest of all the planets; and Saturn the second largest. Neptune and Pluto are so far away from the sun that they can be seen only with the help of a telescope. See Figure 1 and note which of the four planets are bigger than the earth. Which is the planet closest to the earth on each side?

Mercury being nearest to the sun receives a great amount of heat from it. The time it takes to complete one revolution round the sun is also the shortest. It requires just 88 days as against about 365 days and 6 hours by our earth. Pluto, on the



I. The Earth as seen from the Space

This is a photograph of the earth taken from a rocket at a distance of about 340,000 *kilometres. Even from such a distance certain parts of the earth are quite clear; and others not so clear because of the clouds. Note that the names of various parts of the earth have been inserted later on for our convenience. What do you think is the shape of our earth as it appears from this picture?*

other hand, is the coldest planet in the solar system It takes as many as 248 years to go once round the sun. Generally the temperatures found on each planet depend upon its distance from the sun. The closer the planet to the sun, the higher is its temperature. Can you then imagine what would have happened had the earth been farther away from the sun than it is now? Also think for a while, what would have happened if it were closest to the sun.

The Earth—Our Planet

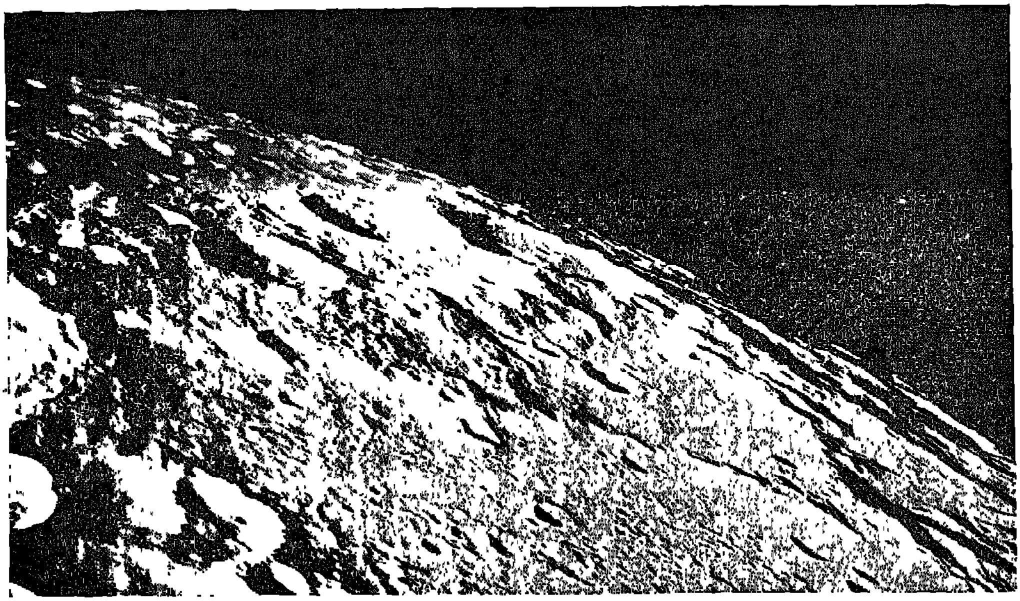
The earth as you know is the third nearest planet to the sun. In size it ranks fifth among the planets. As compared to Jupiter and Saturn it is a small planet. Jupiter is nearly 1,300 times the size of our earth. Like other planets of the sun, the earth too is a sphere. But it is not a perfect sphere, because it is slightly flattened at the poles. Yet for all practical purposes it is a sphere. Our earth, however, is a unique planet. It is the only planet containing ample water and air around it. The temperatures on the earth are also suitable for human life. For its size it possesses a very big satellite, namely, the moon.

In the past, people had doubts about the spherical shape of the earth. They were afraid of sailing far away from the coasts, thinking that they might fall over the edge of the earth. On the other hand, those who believed that the earth was a sphere put forth certain indirect proofs. Today, however, no more proofs are needed as man has successfully sailed round the world. Regular air services go round the world almost round the clock. Photographs of the earth showing its spherical shape have been obtained from rockets and artificial satellites flying at high altitudes. Man has managed to obtain photographs of the earth even from the neighbourhood of the moon with the help of a television camera.

Satellites—The Attendants

Besides planets the solar system contains other celestial bodies like the moon. The moon, for example, revolves round our earth, and follows it in its revolution round the sun. The moon is, therefore, called the satellite of the earth. The word *satellite* means a companion or an attendant.

There are in all thirty-one moons or satellites in our solar system. Will you not be surprised to know that Jupiter has as many as twelve moons or satellites? What a nice night would it be with quite a few moons shining in the sky! But let us not forget that like the planets even the satellites have no light of their own. Why does the moon, or only a part of it, give us light during the night? The moon merely reflects the light which it receives from the sun. This is what even the earth and the other planets do.



II. The Surface of the Moon

This is a photograph of the surface of the moon taken from a distance of just 130 kilometres. The distance along the horizon of the moon is about 1,100 kilometres. What information do you get about the surface of the moon from this picture?

The Moon—The Attendant of the Earth

The moon is smaller than the earth. In fact, it is smaller than any other planet in the solar system. Its diameter is nearly one-fourth that of the earth. How is it then that it often appears to be the biggest celestial body from our earth? It is simply because the moon is the nearest celestial body to the earth. The moon is approximately 384,000 kilometres away from the earth. This distance is nearly thirty times the diameter of the earth. The light reflected by the moon reaches us in just one and a quarter second.

A lot of information about the moon, our nearest celestial neighbour, has been gathered in the last few years. It is now known that it contains neither water nor air. It is too hot during the day and very cold during the night. Since long, scientists have been observing the surface of the moon. Nearly 10,000 surface features of the moon have been named. Recently detailed maps of the moon's surface have been prepared with the help of photographs. Indeed, this is no small achievement. It is now certain that one day man would land on the moon.

The Universe—The Limitless Space

The earth on which we live is often described as big or wide. The moon, our nearest celestial neighbour, is also considered to be far, far away from the earth. But think of the millions of stars that we see in the sky. You would then realise how small our earth is! It is no more than a tiny speck in the limitless outer space. In fact, the entire solar system is a very, very small part of the total space known as the *Universe*.

The sun is just one of the millions of stars that we see in the night sky. A star, like the sun, is a tremendously hot body. It is made up of extremely hot gases. There are thousands and thousands of stars, many of which are far bigger than the sun, which is our star. It is very difficult to imagine how vast the Universe is. If the rays of the sun take about eight minutes to reach us, the light of the nearest star to the solar system takes more than four years to do so. The light of some of the big stars which we see in the sky takes nearly 300 years to reach us. And those of distant ones may take millions of years.

It is better to leave them there and think more about our earth.

The New Terms You Have Learnt: *Orbit*—A fixed path along which a celestial body revolves round a bigger celestial body. *Solar System*–The sun, the nine planets and the satellites, etc. that revolve round the sun. *Universe*—The vast or rather unlimited total space of which the solar system is but a very small part.

Exercises

Review Questions

1. Answer the following questions in brief:
    (i) *Why is even the earth called a celestial body?*

- (ii) *Name three different kinds of celestial bodies.*
- (iii) *How do we distinguish a planet from the star in the sky?*

2. Distinguish between:
   - (i) *a circle and an ellipse.*
   - (ii) *a planet and a satellite.*
   - (iii) *waning and waxing of the moon.*

3. Make out correct pairs from the two columns:
   - (a) *The closest celestial neighbour of the earth*
   - (b) *The star which is nearest to the earth*
   - (c) *The planet farthest from the sun*
   - (d) *A fixed path along which a satellite revolves round a planet*

   - (i) *Pluto*
   - (ii) *Sun*
   - (iii) *Moon*
   - (iv) *Uranus*
   - (v) *Orbit*

4. Complete the following statement with a correct ending:
   Generally only a part of the moon gives us light because
   - (a) *we are able to see only a part of the moon lit by the sun.*
   - (b) *a part of the moon is hidden by another celestial body.*
   - (c) *the moon is an imperfect sphere.*
   - (d) *the moon has no light of its own.*

5. What is the solar system? Describe its composition?

6. How is our earth a very unique planet in our solar system?

Picture Reading

7. Look at the picture of the moon. What information about the moon's surface do you gather from this picture?

Map Work

8. On a piece of paper draw circles representing the planets according to their size and distance from the sun.

Topic for Class Discussion

9. '*Man on the Moon*'

   Collect information and the latest pictures of the moon from newspapers. State the difficulties in landing on the moon and efforts being made to overcome them.

2. Motions of the Earth

The Terms You Already Know: *Axis*—An imaginary straight line passing through the poles of the earth and about which the earth rotates. *Rotation*—Continuous spinning of the earth about its imaginary axis, once every twenty-four hours. *Revolution*—Motion of the earth round the sun, one revolution requiring one year or about 365¼ days. *Equator*—An imaginary circle along the earth's surface running midway between the two poles

The earth has two motions—rotation and revolution. They are very important for us. We have day and night because of the earth's rotation. Just imagine what sort of world it would be without day and night. If day and night are caused by the earth's rotation, seasons like summer and winter are largely due to its revolution. Can you imagine how dull our life would be if there were no seasons?

First let us see how day and night are caused by the rotation of the earth.

Rotation—Day and Night

You already know that the earth has no light of its own. It receives both heat and light from the sun.

Let a ball represent the earth. Take it to a dark room and place it against a candle or torch light. You will at once notice that only half the surface of the ball receives light, no matter how you place it. This is what happens in space. Half the earth is lit by the sun, while the other half remains in darkness. In other words, while it is day in one half of the world it is night in the other half.

Every morning the sun rises on the eastern horizon. It seems to travel across the sky from east to west before it sets on the western horizon. Now just recollect what happens when you are looking at trees and telegraphic poles from a running railway train. You feel as if the trees and poles are speeding away in the opposite direction. In spite of this impression the fact is that it is the train and not the trees that move.

Similarly, it is not the sun but the earth itself which rotates about its imaginary axis. In what direction does the earth rotate ? You may also note that we do not feel the movement of the earth because it is very very big.

Let us continue with our experiment. Mark a point on the model of the earth with a piece of chalk. Let this point represent your location on the earth. Place the earth-model against the sun (a torch or a candle) in such a way that the point you have marked on the earth remains in darkness. Now rotate slowly the earth-model along the plane of its equator and follow the marked point on it carefully.

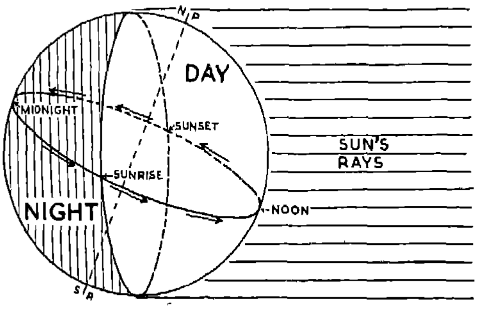


Fig. 2. The Rotating Earth

Note that exactly half the earth is lit by the sun. Follow a point on a rotating earth and [illegible] *of the sun at* [illegible] *How does the* [illegible] *that of the noon?*

As you begin to rotate the earth, from left to right, the point lying in total darkness gradually moves towards the sun (candle or torch). It begins to receive some light though not the actual rays of the sun (torch or candle). At this point it is *dawn.* Now it receives the first rays of the sun. This is a break of day or *sunrise* for this point. The sun is on the horizon. Now the rays of the sun at this place are nearly horizontal or highly slanting.

As the earth continues to rotate, the sun seems to climb up in the sky. Its rays over the given point are now more or less vertical or least slanting It is *noon* at this place. Hereafter the sun begins to climb down as the given point gradually moves away from the sun. It is once again seen on the horizon. It is *sunset* or evening at this point. The sunset is followed by some diffused light of the sun, not far below the horizon. This is known as *dusk.* As the earth continues to rotate, the point moves further away from the sun till it is at its farthest. It is *midnight* at this point.

Thus it is clear that day and night are caused by the rotation of the earth. The earth rotates from west to east, and takes 24 hours to complete one rotation. The sun does not rise at one and the same time all over the world. When half the world has day, the other half has night. It may be sunrise at one place, while another place may be having its noon. A third place may have its midnight and at yet another place the sun may be just about to set.

Revolution and Seasons

A day consists of 24 hours and is divided into two parts—day and night. This division of a day into day and night is, however, not uniform. Sometimes the day may be longer than night; and at others, the night may be longer than the day. Also the heat we receive from the sun at a given place varies from time to time. This variation in the intensity of heat of the sun's rays depends upon the angle at which they strike a given part of the earth. Thus the varying length of the day and the varying intensity of heat with which the sun's rays strike the earth are responsible for causing seasons like summer and winter.

Unequal Days and Nights

The length of day and night at a place is generally unequal. For instance, at Delhi a day may be 13 hours long and night only 11 hours. On some other day, the night may be about 14 hours long and the day hardly 10 hours. Why are days and nights generally unequal? This is because the axis of the earth is inclined towards the plane of its orbit. The axis of the earth forms an angle of $66\frac{1}{2}°$ to the plane of its orbit. Study Figure 3 carefully.

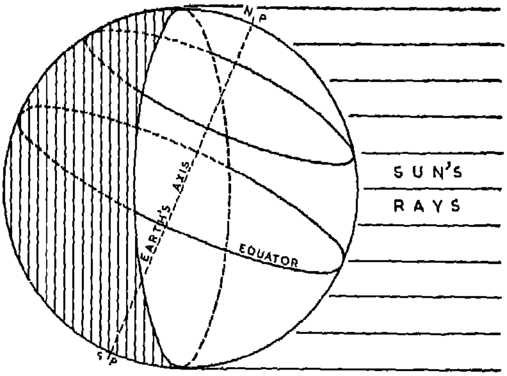


Fig. 3 Inclination of Earth's Axis and Unequal Length of Days and Nights

Note that the axis of the earth about which it rotates is inclined. How much part of the circle drawn north of the equator is in light?

In this figure you will see a circle running parallel to the equator. Now actually measure the length of that part of the circle which is in light and the other part which is in darkness. You will find that at a given time more than half of this circle receives light; and less than half lies in darkness. Now imagine a point on this circle steadily moving with the rotating earth. This point completes one circle in 24 hours. You will notice that the journey of this point through the sun's light is longer than its passage through darkness. It means this point or place on the earth enjoys a longer day and a relatively short night.

Now draw a similar circle halfway between the equator and the South Pole. You should see that it is parallel to the equator. You will notice that for a place on this circle day would be shorter than night.

Draw another circle like this, close to the South Pole. What do you notice? You will find that no part of it receives the sun's rays. In other words, a point on this circle would keep on moving with the rotating earth all the 24 hours without receiving any rays of the sun. It thus has a night of 24 hours. Exactly opposite would be the case for a point close to the North Pole. It has a 24-hour day with no night at all.

If you observe the diagram very carefully you would find that only on the equator the day and night are of equal duration. As you move away from the equator on either side, the difference between the duration of day and night goes on increasing rather rapidly.

This unequal length of day and night is a very important fact. It leads to varying amounts of heat at a given place in different parts of the year. This in turn leads us to call a certain part of the year as summer and another winter.

Slanting and Direct Rays of the Sun

In the morning and evening, the rays of the sun are more slanting. On the other hand, they are more direct or vertical at noon. It is our common experience that the rays of the sun at noon give us much more heat than the rays of the morning or evening sun. Why is it so?

Take a stick and fix it on an open level ground. Observe its shadow in the morning, noon and evening. You will notice that its shadow is much longer both in the morning and in the evening. At noon, however, it is spread over a relatively small area. It suggests that the shorter the shadow, the more intense is the heat. This is because the vertical rays fall over a small area giving it a greater amount of heat. On the other hand, the heat received from the slanting rays is much less as they are spread over a large area.

Now you may observe the noon-shadow of the stick for a couple of days every month for a year. You will notice that even at noon the length

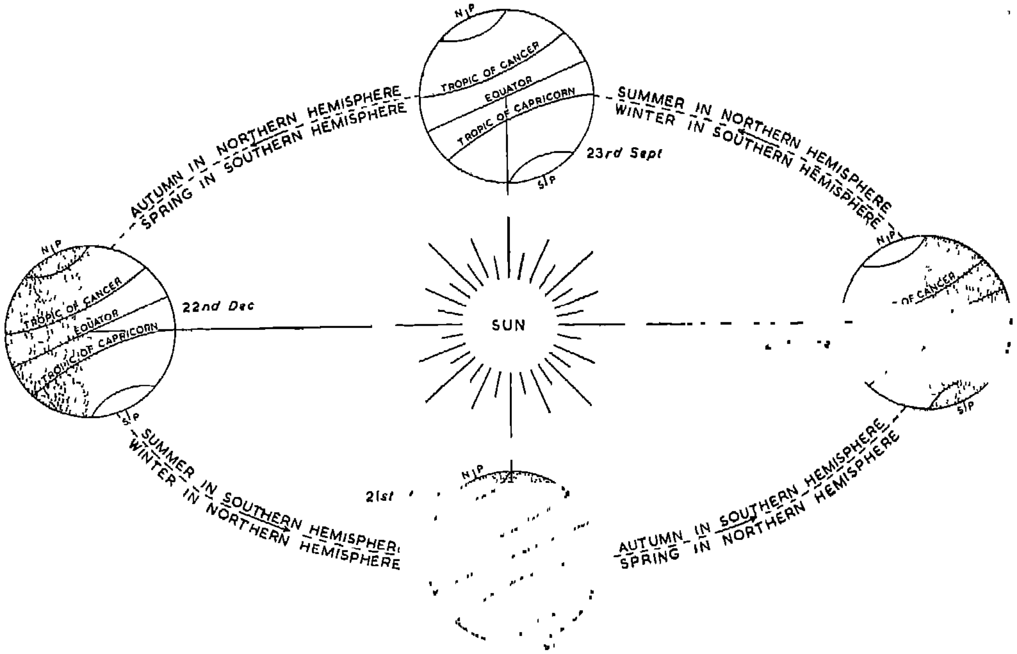

N.P
TROPIC OF CANCER
EQUATOR
TROPIC OF CAPRICORN
S.P
23rd Sept
SUMMER IN NORTHERN HEMISPHERE
WINTER IN SOUTHERN HEMISPHERE
AUTUMN IN NORTHERN HEMISPHERE
SPRING IN SOUTHERN HEMISPHERE
N.P
TROPIC OF CANCER
EQUATOR
TROPIC OF CAPRICORN
S.P
22nd Dec
SUN
N.P
OF CANCER
S.P
SUMMER IN SOUTHERN HEMISPHERE
WINTER IN NORTHERN HEMISPHERE
21st
N.P
AUTUMN IN SOUTHERN HEMISPHERE
SPRING IN NORTHERN HEMISPHERE

Fig. 4. Revolution of the Earth and Seasons

Note that the earth's axis is uniformly inclined towards the plane of its orbit in all its four positions round the sun. Do you see that in all the four positions in the diagram the axes of the earth are parallel to one another?

of the shadow varies from month to month. During the summer months you will notice the noon-shadow of the stick shorter than what it is during the winter months. This is why heat at noon during the summer months is more intense than what it is in winter.

Thus, when days are longer and the rays of the sun are more vertical we have the summer season. In winter, on the other hand, days are short and the rays of the sun even at noon are rather slanting.

A Cycle of Seasons

Now let us follow the earth on its revolution round the sun. Figure 4 will help us to study the four positions of the earth each at an interval of three months.

Figure 4 shows only the four major turning points in the revolution of the earth round the sun. In all these positions the axis of the earth makes an angle of 66½° with its plane of orbit. It means the equator of the earth forms an angle of 23½° to the plane of the earth's orbit.

III. *Christmas Time in the Northern Hemisphere*

This is a picture of a Christmas sled ride in the western U.S.A., North America. What suggests to you that it is severe winter?

Study carefully the position of the earth on June 21. Notice the two Poles. The North Pole is tilted towards the sun, whereas the South Pole is away from it and is in darkness. The direct or perpendicular rays of the sun fall not on the equator but at places 23½° north of it. The imaginary circle running along the earth's surface at an angular distance of 23½° from the equator to its north is called the *Tropic of Cancer*. Therefore, the rays of the sun are perpendicular at noon, not on the equator but on the Tropic of Cancer in the Northern Hemisphere. You will also

IV. *Christmas Time in the Southern Hemisphere*

Christmas is being celebrated out-doors in Australia. What season is it in this part of the world? Why is it different from that of the Northern Hemisphere?

notice that greater part of the Northern Hemisphere receives the sun's rays. In other words, the Northern Hemisphere has longer days and more direct rays at noon. Therefore, it is the summer season in the Northern Hemisphere.

In the Southern Hemisphere the rays of the sun are very slanting. A relatively small part of this hemisphere receives the sun's rays. As a result the days are short and the nights are long. It is, therefore, the winter season in the Southern Hemisphere.

Now look at the position of the earth on December 22. It is the South Pole which is now tilted towards the sun, the North Pole being away from it. The perpendicular rays of the sun are now neither on the Tropic of Cancer, nor on the equator. They are on the places 23½° south of the equator. An imaginary circle running along the earth's surface at an angular distance of 23½° from the equator to its south is called the *Tropic of Capricorn.* Thus the rays are perpendicular on the Tropic of Capricorn in the Southern Hemisphere. Now in this Hemisphere the days are also longer. It is, therefore, summer in the Southern Hemisphere and winter in the Northern Hemisphere. Thus there are opposite seasons in the Northern and Southern Hemispheres.

Let us look at the intermediate positions of the earth between these two extremes.

On September 23 and March 21, you will notice that both the poles are able to receive the sun's rays. This is because the rays of the sun fall perpendicular on the equator at noon. On these two days exactly half the part of each hemisphere receives the sun's rays, making the day and the night equal all over the world.

On September 23, it is the autumn season in the Northern Hemisphere and the spring in the Southern Hemisphere. March 21, stands for spring in the Northern Hemisphere and autumn for the Southern Hemisphere.

The earth completes one revolution round the sun in 365 days and nearly six hours. In order to make up the difference of six hours every year, we add one more day every four years. A year with 366 days is called a *Leap Year*. One day is added to the month of February, making the number of days in this month 29 instead of 28. The year 1968 was a leap year. Why was it so? Which will be the next leap year?

The New Terms You Have Learnt: *Tropic of Cancer*—An imaginary circle running along the earth's surface at an angular distance of 23½° from the equator to its north. *Tropic of Capricorn*—An imaginary circle running along the earth's surface at an angular distance of 23½° from the equator to its south

Exercises

Review Questions

1. Answer the following questions in brief :

   (i) *How much time does the earth take to complete one rotation?*

(ii) *Name the two most important seasons.*
(iii) *On what days do we have equal days and nights all over the world?*

2. Distinguish between:
   (i) *morning and evening.*
   (ii) *spring and autumn.*

3. Draw a diagram and explain how day and night are caused?

4. Explain the position of the earth in relation to the sun when you have winter. Draw a diagram.

5. Santhana sees the noon-sun exactly overhead on March 21, Jil sees it on December 22, and Saida sees it on June 21. These children come from the towns of Muscat (South-west Asia). Quito (South America), and Rockhampton (Australia). Find the respective town of each one of them, and locate them on a map.

Picture Reading

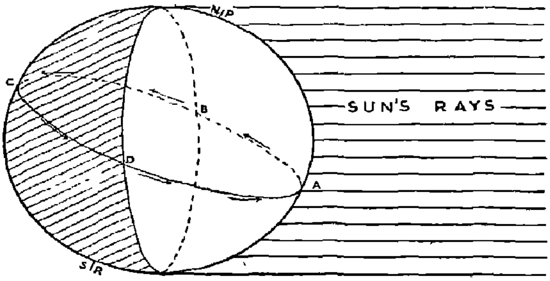
6. Compare the pictures of Christmas celebrations in Australia and the United States of America. Why do you think that they represent two different seasons?

Observation and Graph Work

7. Record the timings of sunrise and sunset at your place on the 21st of each month. Prepare a graph showing the length of day-time for all the twelve months. Answer the following questions with the help of your graph:
   (i) *In what month is the day shortest?*
   (ii) *In what months, days and nights are nearly equal?*

8. Answer the following questions with the help of the diagram given below:
   (i) *Which point in the picture directly faces the sun? What time of the day is at this point?*
   (ii) *What time is it at point B?*

(iii) *Name the point where it is sunrise.*
(iv) *On what point is it midnight?*



Topic for Class Discussion

9. Draw a diagram to show the earth's axis forming an angle of 66½° with the plane of its orbit. In the other diagram let the axis stand perpendicular to its plane of orbit.

   Compare these two diagrams. What would happen if the earth's axis were really perpendicular to its plane of orbit?

3. Locating Places on the Earth

The Terms You Already Know: *Globe*—A man-made model of the earth *Parallels of latitude*—Imaginary circles running parallel to the equator. *Meridians of longitude*—Imaginary semi-circles running from pole to pole

Very often we need to locate places in our neighbourhood. It is easy for us to locate them in relation to one another. But it is a different thing when we are called upon to locate hundreds of places on our earth. For this we need some common starting point convenient to all. The earth being a sphere, it possesses neither an edge nor any other natural point that can be referred to by all.

The fact of rotation provides us with the two basic points of reference —the North Pole and the South Pole. They are the end points of an imaginary axis about which the earth rotates. You can easily locate these two important points on a globe.

Important Parallels of Latitude and Heat Zones

From these poles we derive a series of points which are exactly half-way between the two. A line connecting these points encircles the earth and is known as the *Equator*. The equator is, thus an imaginary circle running around the earth exactly half-way between the two poles.

The equator is the largest possible circle that can be drawn around the earth. It is about 40,000 kilometres long. At the equator the earth's diameter is longer than the earth's axis by about 45 kilometres. Why should it be so?

The equator lies perpendicular to the earth's axis. It, therefore, makes an angle of 23½° to the plane of the earth's orbit.

The equator divides the earth into two equal halves. The half lying north of the equator is called the *Northern Hemisphere*. The other half of the earth is the *Southern Hemisphere*.

Not all the places on the earth are able to see the noon-sun exactly overhead. A region in which it may be possible to see the sun exactly overhead is called the *Tropical Zone.* It is the hottest part of the world. It is, therefore, known as the *Torrid Zone.* The limits of this zone are known as the *Tropics.*

The northern limit of the tropical zone is called the *Tropic of Cancer.* The Tropic of Cancer is a circle that connects places where the noon-sun is exactly overhead on June 21. This circle is in the Northern Hemisphere and lies at an angular distance of 23½° from the equator. All the points on this circle are at a uniform distance from the equator. Hence it runs parallel to the equator. If you see the map of India, you will notice the Tropic of Cancer running east-west almost mid-way through our country.

The southern limit of the tropical zone is known as the *Tropic of Capricorn.* The noon-sun is seen overhead on this tropic on December 22. The circle lies in the Southern Hemisphere. It also runs parallel to the equator at an angular distance of 23½° from it. Why is it just 23½° away from the equator?

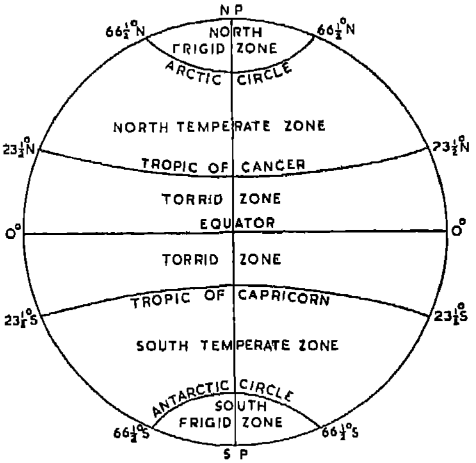


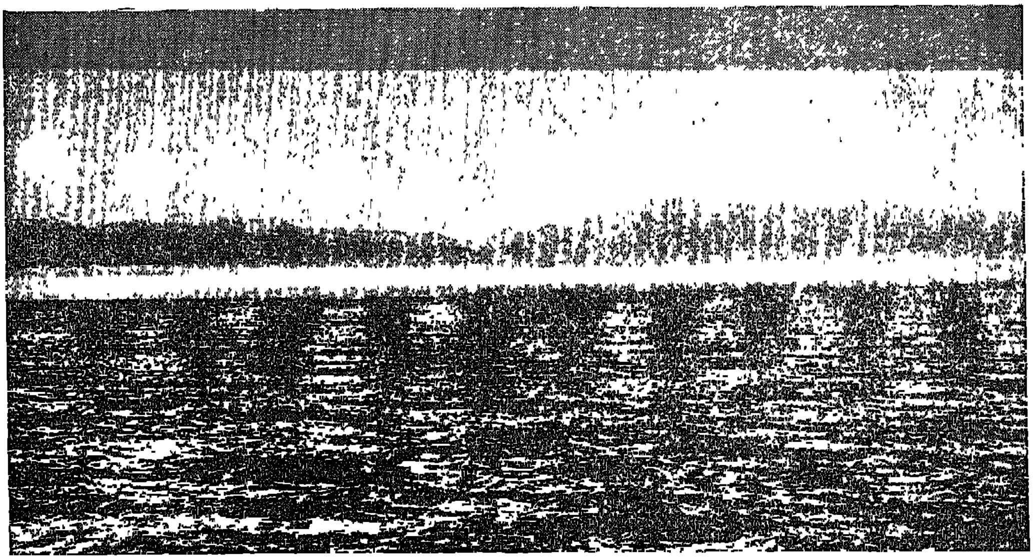
Fig 5. Important Parallels of Latitude and Heat Zones

Note that the Tropical and Polar Circles are at 23½° from the equator and the poles respectively. What is the significance of 23½°?

Places lying 23½° from each of the poles or 66½° from the equator are also significant. A circle connecting these points in either hemisphere is called a *Polar Circle.* In the Northern Hemisphere it is known as the *Arctic Circle.* It lies at a distance of 66½° north of the equator. The longest day on the Arctic Circle is of 24 hours. Can you tell what date and season of the year it must be?

As one proceeds from the polar circle towards the Pole the duration of day and night goes on increasing very rapidly. Whereas the longest day or night at the polar circle is only 24 hours long, it is as much as six months at the poles.

In the polar region the sun does not rise high above the horizon.



V The Midnight Sun

Look at a picture of the night sun, taken at intervals of an hour, in northern Canada. The position of the sun in the extreme left represents evening In the centre of the picture, where the sun is seen close to the horizon, it is midnight What time does the position of the sun in the extreme right suggest?

Its rays are, therefore, very slanting. They give very little heat Hence the regions are the coldest or very frigid in the world. They are called the *Frigid Zones*.

In between the tropical zone and the polar zone in each hemisphere lies yet another climatic zone. It is neither very hot nor very cold. This zone in both the hemispheres is, therefore, known as the *Temperate Zone.* It lies between 23½° and 66½°, that is between the Tropical and Polar circles in each hemisphere.

The polar circle is 66½° away from the equator. Thereafter the Pole is at a distance of yet another 23½°. Can you then find out the angular distance between the equator and the Pole? The Poles are situated at an angular distance of 90° from the equator on its either side.

The angular distance between the equator and the North Pole is divided into 90 equal parts. In each hemisphere 90 circles are supposed to be drawn around the earth at a regular interval of one degree each. These circles including the equator are parallel to one another. They are often called the *parallels*. Since all these circles represent angular distance from the equator they are known as *parallels of latitude*. *Latitude* means the angular distance of a place north or south of the equator.

The value of the parallels of latitude is expressed in degrees. Since the equator represents a base or a starting point for both the hemispheres, its value is 0° latitude. As you proceed towards the pole, the value of each successive parallel of latitude increases by 1° till it is 90° at the pole. The length of each parallel of latitude decreases as one moves away from the equator. The pole which represents the 90th parallel is merely a point.

There are 90 parallels of latitude in each hemisphere. In order to distinguish the latitudes of one hemisphere from those in the opposite hemisphere, the value of each latitude is followed by the word either *north* or *south*. Generally this is indicated by letters *N* or *S*. For instance, Ernakulum in Kerala and Lindi in Tanzania (Africa) are located on the parallels of 10°. Whereas the former is 10° to the north of the equator, the latter is 10° south of it. It is, therefore, necessary to say that Ernakulam is situated at 10°N latitude. The latitude of Lindi on the other hand is 10°S.

The latitude of a place helps us to know something about its climate. Generally, the lower the latitude the warmer is the place, and the higher the latitude the colder is its climate.

Meridians of Longitude

The latitude of a place also helps to some extent in locating the place. For example, the latitude of Santa Cruz is 50°S. The whole parallel of latitude will have to be searched to locate this place. But if we can divide this circle into small parts and assign them some numerical values our work would be easy.

It is a common practice to divide a circle, whether big or small, into 360 divisions. Thus each division is equal to 1°. On a globe you will find semi-circles running from pole to pole. They cut the parallels of latitude at right angles. The semi-circles running from pole to pole or from north to south are known as *meridians*.

The numbering of meridians presents a great difficulty for want of a natural point which would serve as a starting point.

In the case of parallels, the equator serves very well as a starting point. This is because it is the largest parallel. Moreover it lies

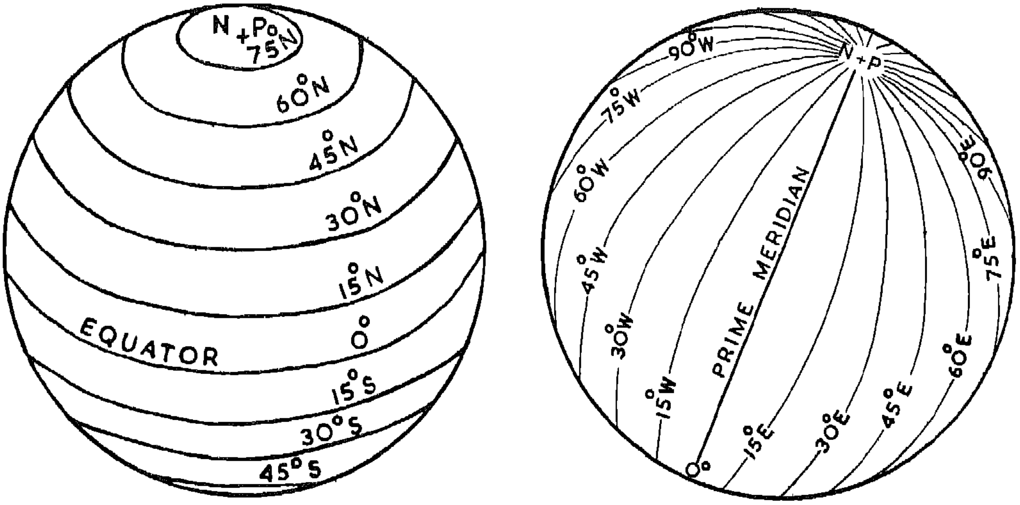


Fig. 6 Parallels and Meridians

Note that the parallels of latitude are circles; but the meridians of longitude are semi-circles. Compare the 0° parallel with the Prime Meridian

half-way between the poles. But all the meridians are of equal length. Hence it is necessary to decide upon some place as a common starting point for all. The Greenwich Observatory at London has been made the starting point. The meridian passing through Greenwich (London) is, therefore, called the *Prime Meridian*. It serves as a common base for numbering meridians of longitude lying on either side of it—east as well as west. The value of the Prime Meridian is, therefore, 0° longitude.

Longitude means angular distance east or west from the Prime Meridian. For instance, Jabalpur is situated on the meridian of 80° east of Greenwich. Its longitude is, therefore, 80°E. Pittsburg, in the United States, is also situated on the meridian of 80°; but it is to the west of Greenwich. Its longitude, therefore, is 80°W.

Of the 360 meridians of longitude, 180 lie to the east of Greenwich and 180 to the west. Of course the 180th meridian is common and is mentioned simply as 180°.

Now look at the network of parallels of latitude and meridians of longitude on the globe. You can locate any point on the globe very easily with the help of this grid. For example, Dhubri in Assam is situated at 26°N latitude and 90°E longitude. Mandalay in Burma is

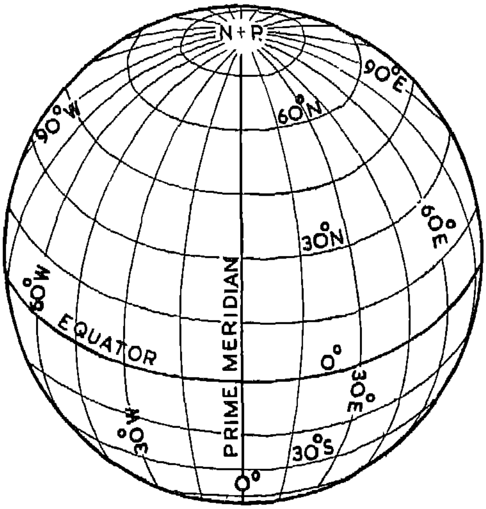


Fig. 7 A Grid of Parallels and Meridians
Note that the parallels of latitude and the meridians of longitude cut each other at right angles How can we locate any place on the globe with the help of its latitude and longitude?

situated at 22°N latitude and 96°E longitude. It is very easy to locate any place on the globe once we know the longitude and latitude of a place. We get the required location of a place where the given parallel of latitude and the meridian of longitude cut each other. Even a ship in the ocean describes its exact location by its latitude and longitude.

Longitude and Time

You know that the sun does not rise all over the world at one and the same time. It may be morning at one place and noon at another. It, therefore, follows that time generally varies from place to place. This is because the sun is our natural time keeper. A watch from which we find out time in terms of hours, minutes and seconds is primarily adjusted in relation to the sun. The simple method of adjusting a watch is to make it 12 O'clock when it is noon at a given place. The time shown by such a watch becomes the *local time* for that place. It may be remembered that all the places on a given meridian of longitude have the same local time.

If you know the longitude of a place, you can easily find out its local time. You know that the earth rotates about its axis once in 24 hours. It means it moves 360° of longitude in 24 hours. In other words, its speed is 15° of longitude per hour. Thus it takes 4 minutes for the earth to move 1° of longitude.

Now suppose it is 12 O'clock or noon at London. What would be the local time at Alexandria in the United Arab Republic? First we must know the longitude of the place. It is 30° E. Then the local time at Alexandria would be 2 hours ahead of Greenwich time. Hence, it would be 2 O'clock in the after-noon. At the same time at New Orleans in the United States it is 6 O'clock in the morning. It is six hours behind Greenwich time. This is because the longitude of New Orleans is 90°W.

If a place whose time we want to find out is to the east from a given place we have to add the difference of time. If it is to the west of it we have to deduct the difference of time to get the correct answer.

Standard Time

The local time of places is bound to differ from place to place unless they are on the same meridian of longitude. For example, in India there will be a difference of about 1 hour and 45 minutes in the local time of places like Dwarka in Gujarat and Dibrugarh in Assam. From your atlas find out the longitude of these places. This difference in local time from place to place will create difficulties. For example, if we follow the local time of each place it will be difficult to prepare a time-table for trains running over long distances. This may be particularly so if there is a considerable difference between the longitude of two places, say like Bombay and Calcutta. It is, therefore, necessary to follow the local time of some central place in a country as its standard time for all. In India the longitude of $82\frac{1}{2}$°E (82° 30′) is treated as a *standard meridian.* The local time of places on this meridian serves as the Standard Time for the whole country. It is known as the Indian Standard Time. It is five hours and a half ahead of Greenwich Time.

The countries which have a great longitudinal extent have more than one standard time. For example, in the Soviet Union there are as many as eleven time zones each one having a standard time of its own.

The New Terms You Have Learnt: *Latitude*—Angular distance of a place from the equator. *Longitude*—Angular distance of a place from the Prime Meridian. *Local Time*—Time based on the noon-sun of a given place. *Standard Time*—The local time of a place situated on the Standard Meridian of a country, or its part. It is followed by all in that region.

Exercises

Review Questions

1. Answer the following questions in brief:
   (i) *Which are the two basic points of reference on the earth?*

(ii) *How do we get these two points?*
(iii) *Which is the standard meridian of India?*

2. Some of the statements given below are true and some false. Pick out the statements that are false and rewrite them after making necessary corrections.
   (i) *The parallels of latitude are of unequal length.*
   (ii) *The equator and the Prime Meridian are the two largest circles that can be drawn on the earth.*
   (iii) *In the Tropical Zone the noon-sun is seen exactly overhead everyday.*

3. Give one term for each of the following:
   (i) *The heat zones of the earth bounded by the tropical circle on the one hand and the polar circle on the other.*
   (ii) *A parallel of latitude where the longest night is of 24 hours, duration on December 22.*

4. Explain how the standard time is determined in India.

Picture Reading

5. Look at the picture of the midnight sun. Note the positions of the sun at evening, midnight and morning as shown in the picture.

Map Work

6. Trace a map of India and show therein the Tropic of Cancer and the Standard Meridian. Name a few towns which are situated on or very close to these two lines.

Topic for Class Activity and Discussion

7. *'If we do not have a standard time for India'*

   Imagine that the President of India broadcasts to the nation from Delhi at 8 p.m. At what time would he be heard at different State capitals? Arrange these cities in order of time you have found out. Which State capitals would be able to listen to him before time? Which would be the last to receive his message?

4. Land, Water and Air on the Earth

The Terms You Already Know: *Continents*—Large masses of land rising above sea-level. *Oceans*—Deep, large and interconnected basins on the earth's crust filled with salt waters

The earth is the name we have given to our planet. The word *Earth* constantly reminds us of the land on which we live and the soil from which we get our food. In this sense the name we have given to our planet seems justified.

Some scientists, however, prefer to call our earth a *watery planet.* This is because, unlike the rest of the planets in the solar system, it contains a huge amount of water. Actually the greater part of the earth's surface is covered with water. But for this water, human life would have been impossible on the earth.

Like the land and water, even the air which envelops the earth is a part and parcel of it. It must be remembered that the earth rotates about its axis along with the atmosphere.

Thus the earth consists of three major domains —land, water and air. They are known as the three *realms of the earth.* The realm of the earth concerned with its land is known as *lithosphere.* The word *litho* in Greek means stone. The term lithosphere, therefore, means the solid crust of the earth. It includes even that part of the earth's crust which is covered with ocean waters.

The waters on the earth's surface are collectively known as *hydrosphere.* The air envelope around the earth is known as *atmosphere.*

Continents

The large masses of land rising above sea-level are known as *continents.* They are rather unevenly distributed. Most of the land area lies in the Northern Hemisphere. The major land masses are Eurasia, Africa, North and South America, Australia and Antarctica. Of these the land masses of Eurasia and Africa are compact and almost joined together.

Eurasia, the largest continent, is generally divided into two continents of Europe and Asia. In fact, Europe is only a peninsula extending westward from the mainland of Asia. The Ural Mountains and the Ural River form a traditional boundary between Asia and Europe. The continent of Eurasia lies in the Northern Hemisphere.

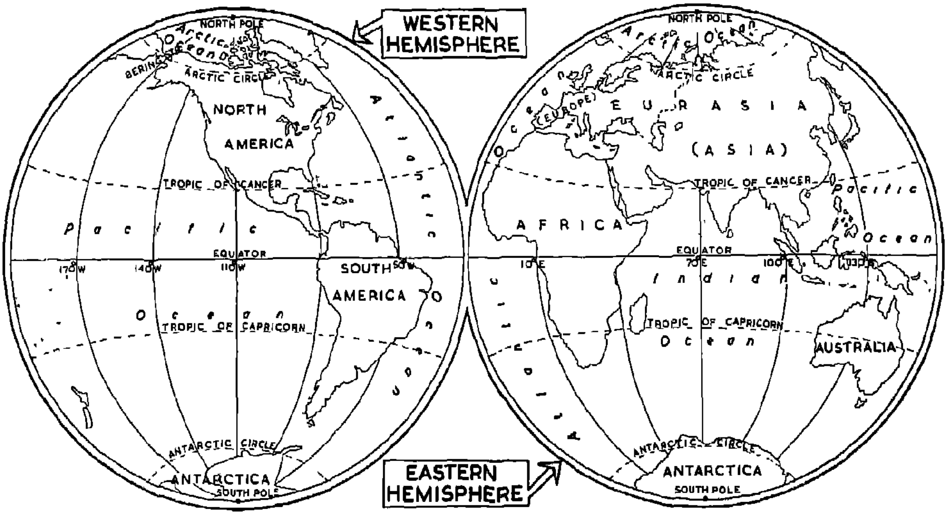


Fig. 8 The Continents

Note the continents and their latitudes Which are the continents lying entirely in the Northern Hemisphere? Which ones are entirely in the Southern Hemisphere?

Africa is the second largest continent, next only to Asia. It is a continent that lies partly in the Northern Hemisphere and partly in the Southern. Note the equator passing half-way through the continent. Do you see both the tropics running across this continent? Study the boundary between Asia and Africa.

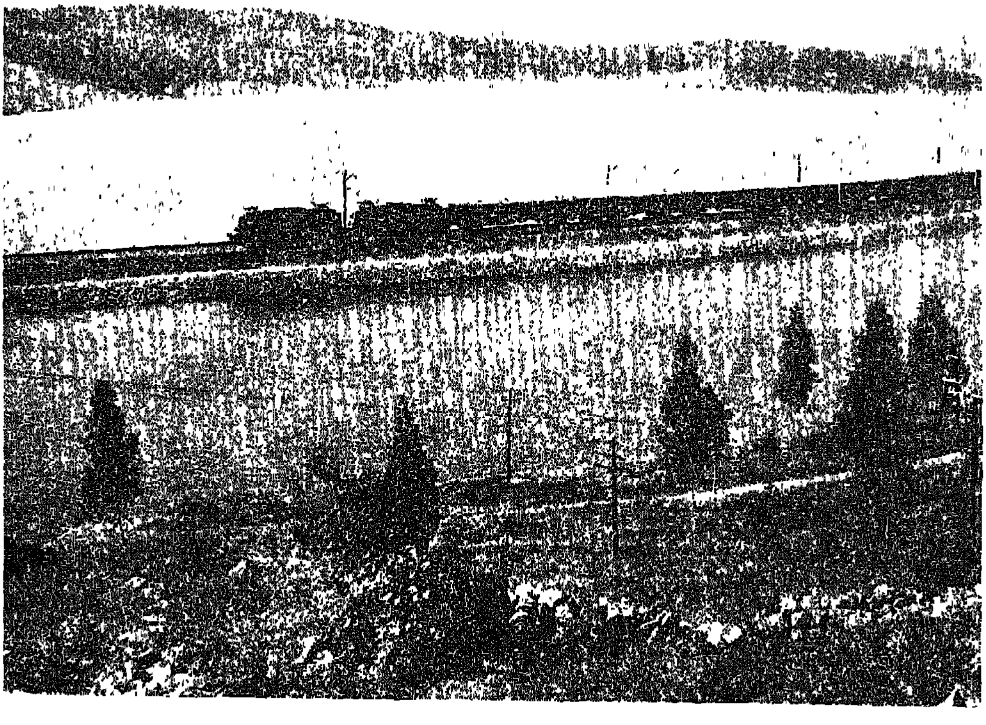
North America and South America are a continuous land mass. It is separated from Asia by a narrow sea—the Strait of Bering. The continent of North America is now separated from South America by the man-made Panama Canal. South America is a continent, the major part of which lies in the Southern Hemisphere.

Australia is the smallest continent and lies entirely in the Southern Hemisphere. It is often called the island continent.

Antarctica is the only continent without any human population. Its size is bigger than the combined area of Europe and Australia. The South Pole lies almost at the centre of the continent. Antarctica is entirely covered with deep snow and ice.

Land Forms

The *Oceans* are very large, deep and interconnected basins on the

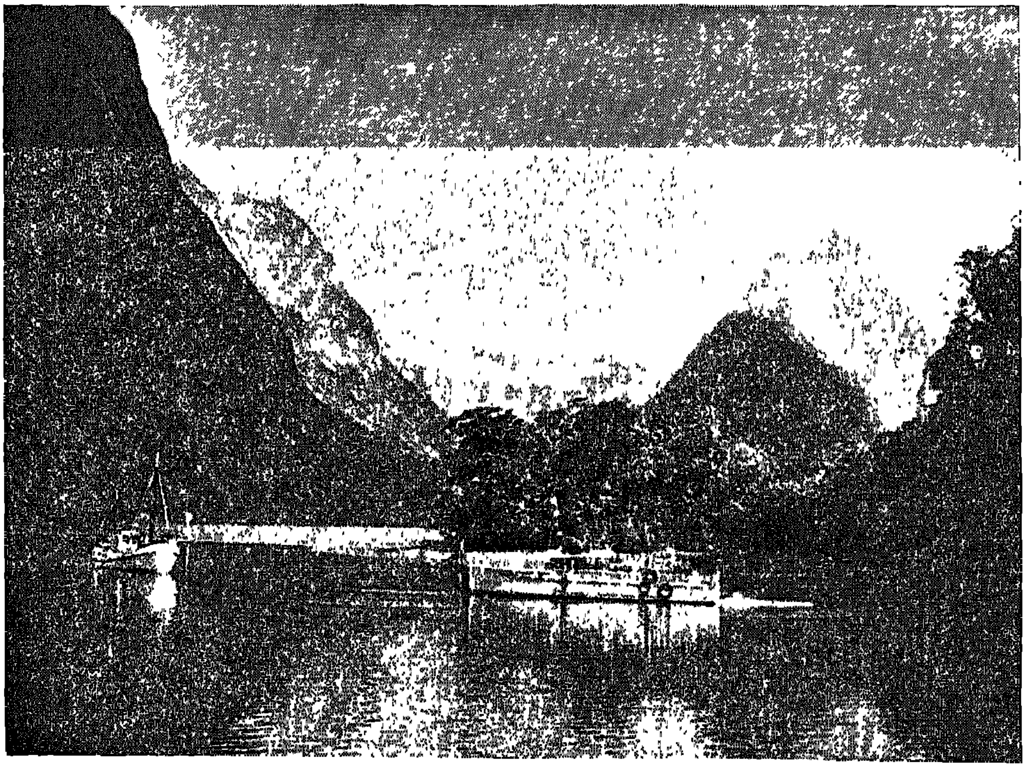


VI. The Old Mountains

Look at the Ural Mountains in the background of this picture Note that the mountains are low, have gentle slopes and rounded features It suggests that they are very very old. Can you imagine how they must have been millions of years ago?

earth's crust. They are filled with salt waters of the seas. The *continents*, on the other hand, are large masses of land rising above sea waters. The ocean basins and continents are thus the land forms of the first order. The average depth of oceans is about 4,000 metres below sea-level. But the average height of the land masses is only 700 metres above sea-level.

The land, that is the face of the earth, is not the same every where. At some places it is flat and level. Some places are rather uneven and rise to a height of a few hundred metres above sea-level. Others are very rugged and may be a few thousand metres above sea-level. All these land features are named differently. They may be



VII. The Young Mountains

Look at the high mountains in the South Island of New Zealand. Note the steep sides, deep valleys and pointed peaks of these mountains How do these young mountains differ from the old mountains?

called plains, valleys, plateaus or mountains. They are the *major land forms* which together make up the face of the land.

Mountains: A mountain is a mass of land considerably higher than the surrounding area. Mountains are a group of very high hills usually forming long chains called *ranges*. Mountains like the Himalayas consist of a series of parallel ranges extending over hundreds of kilometres.

Mountains such as the Himalayas possess very high and sharp peaks and deep valleys. Mountains such as the Aravallis, on the other hand, are low and have rounded features. The scientists believe that such a marked difference is due to a great difference in their age. According to them rugged mountains like the Himalayas are still young as compared to many others. They possess very high peaks and sharp features. Mountains like the Aravallis with low height and rounded features are, on the other hand, very very old.

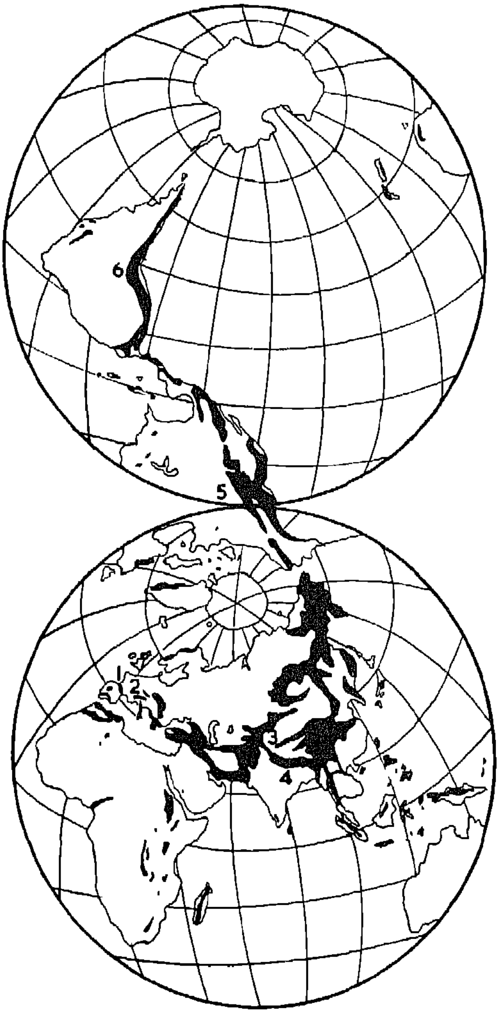


Fig. 9 Mountain Systems of the World (1 Pyrenees, 2 Alps; 3. Pamir; 4. Himalayas; 5 Rockies and 6. Andes)

Note that mountain chains often form a kind of a backbone of continents and groups of islands like Indonesia. Locate the Knot of Pamir. Why is it called the 'roof of the world'?

Look at Figure 9, and note the major mountain chains of the world. In Eurasia, a chain of mountains starting with the Pyrenees and the Alps in the west extends towards the east and north-east up to the East Siberian Mountains. Passing through the Aleutian Islands it extends into the Americas. They are known as the Rockies in North America and the Andes in South America.

From the main chain of mountains in Eurasia, yet another important mountain system branches out. From the Knot of Pamir it moves towards the east and the south-east and extends up to Australia and New Zealand. In this chain lie the Karakoram and the Himalayan Mountains. The highest peak on the earth's surface, namely, Mount Everest, lies in the Himalayas and is situated in Nepal.

Plateaus: A *plateau* is a broad and rather level stretch of land rising sharply above some nearby lowland. Some plateaus extend over thousands of square kilometres. The Great Plateau of the Deccan is an example you already know. Very large parts of Africa, Australia, Asia and North America consist of plateaus. The plateau of Tibet which is very wide and the highest in the world, lies beyond the Himalayas.

Plains and the Great River Valleys: Relatively flat and featureless lowlands are called plains. Some plains are extremely level, whereas others may be slightly rolling or undulating.

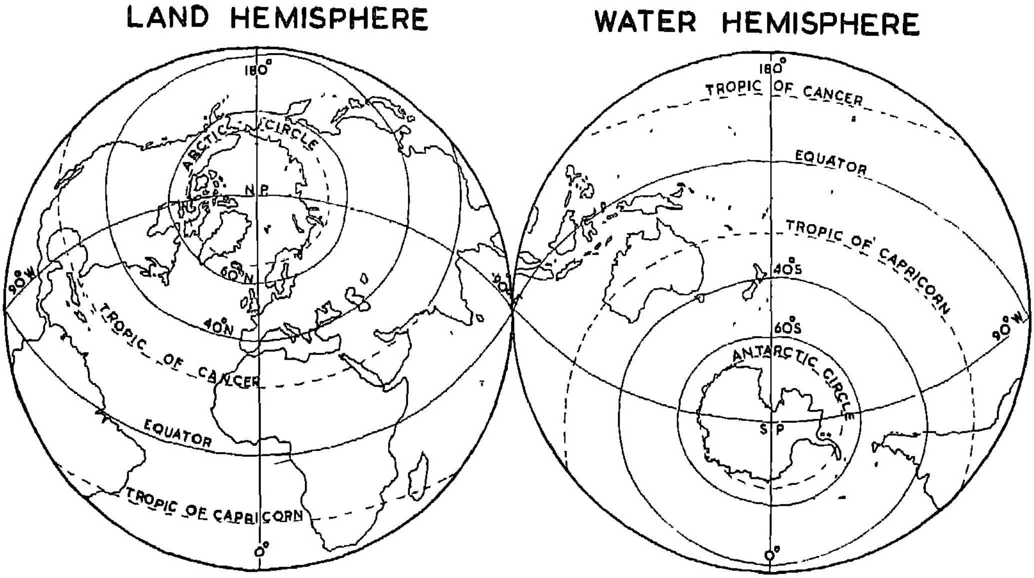


Fig. 10 Land and Water Hemispheres

Note that the oceans are an unbroken expanse of water. They encircle all the land masses, big or small. Do you think that the earth should be called a watery planet?

Some plains are formed by silt deposits brought down by the great rivers and their tributaries. Thus the great river valleys or plains and the deltas are formed only by wearing down or eroding of great mountains. The Great Northern Plain of India is a good example of its kind.

There are large plains made by rivers especially in Asia, Europe and North America. Study carefully a map of the world in your atlas. Locate on it the broad valleys of the Hwang Ho, Yangtze, Mekong, Indus, Tigris and Euphrates, Danube and the Mississippi. Look at the deltas of the Nile and the Mississippi and see how they are extending into the sea.

Look at Figure 10. It consists of two pictures of the globe which together make our earth. It shows the earth divided into two hemispheres —land hemisphere and water hemisphere. The land hemisphere covers nearly six parts out of seven of the entire land surface of the earth. Yet more than half of it is water. The water hemisphere, on the other hand, has only one-seventh of the earth's land surface. In all, actually eleven parts out of sixteen of the earth's surface are covered with sea water. Do not the oceans dominate our earth's surface?

Oceans

The oceans are a continuous and unbroken expanse of water. But they are partly separated by large land masses called continents.

The Pacific Ocean is the largest of all. It covers more than a third of the earth's surface. This ocean is even larger than the combined area of all the continents. It is also deeper than any other. The deepest part of any ocean on the earth lies in the Mariana Trench of the Pacific Ocean. It is more than 11,000 metres deep below sea-level. The Pacific Ocean is bounded by Asia and Australia on the one hand and North and South America on the other.

The Atlantic is the second largest ocean. It is flanked by North and South America on the one hand and Europe and Africa on the other. Its indented coastline is even longer than those of the Pacific and Indian Oceans put together. Its coast is studded with good harbours. It is the busiest ocean, as a large number of cargo ships ply on it.

The Indian Ocean is the third largest ocean. It is slightly smaller than the Atlantic. This is the only ocean named after any country namely, India. It indicates how important this country was in international trade since ancient times. The Indian Ocean is bounded by land in the north, unlike the other two big oceans. It is, therefore, often called half an ocean. It is bounded by Africa, Asia and Australia.

The Arctic Ocean surrounds the North Pole and lies within the Arctic Circle. It is actually an extension of the Atlantic Ocean in the north. It is connected with the Pacific Ocean by a narrow stretch of shallow waters known as the Strait of Bering. It is surrounded by North America and Asia. The greater part of this ocean is covered with ice two to three metres thick for most part of the year.

Atmosphere

Atmosphere is made up of air we find all around us. The atmosphere surrounding the earth extends up to at least 1,600 kilometres from the earth's surface.

There is no sharp boundary between the atmosphere and the outer space. This is because the gases go on becoming rarer and rarer away from the earth.

The atmosphere, like air, is a mixture of gases in a fairly constant proportion. Nitrogen forms about 78 per cent of the atmosphere. Oxygen, the most important gas for life, is about 21 per cent. The remaining one per cent is composed of several gases like Carbon dioxide and Hydrogen. Even the Carbon dioxide representing a very small proportion of the atmosphere is very useful for plants. With this gas the plants are able to manufacture food in the green leaves. We in turn derive most of our food from plants. Even the water we find on our earth is made up of Oxygen and Hydrogen.

Atmosphere in its lower parts also contains water vapour and dust particles. But for these two, there would not be any rain or snowfall on the earth. Unlike other gases in the air the proportion of water vapour varies from place to place and time to time.

Air has weight and therefore, it exerts pressure on the earth's surface. The density of the atmosphere also varies with its height. The lower parts or layers of atmosphere are naturally denser than the upper ones The density of the atmosphere is the highest at sea-level. It goes on rapidly decreasing with its height above sea-level. Even the temperature of the atmosphere goes on decreasing as one moves away from the earth's surface.

The pressure of the atmosphere on the earth's surface also varies from place to place. The difference in air pressure gives rise to the movement of air, along the surface; and is known as *wind*.

The atmosphere serves as a blanket of the earth and maintains a fairly even temperature both at day and night. In its absence the days on the earth, like those on the moon, would have been extremely hot, and nights icy cold. You will know more about these things in the next class.

The New Terms You Have Learnt: *Lithosphere*—The realm of the the earth consisting of solid matter, namely stone or rock *Hydrosphere*—The liquid realm of the earth, namely water *Atmosphere*—Gaseous realm of the earth *Mountain*—Mass of land considerably higher than the surrounding area. *Plateau*—A broad and rather level stretch of land rising sharply above some nearby lowland or water surface. *Plains*—Relatively flat and featureless lowlands.

Exercises

Review Questions

1. Answer the following questions in brief:
   (i) *Which are the three realms of the earth?*
   (ii) *Which are the two continents that are spread on both the sides of the equator?*
   (iii) *Why is the Indian Ocean called half the ocean?*
   (iv) *What are the three major land forms?*

2. Distinguish between:
   (i) *Land hemisphere and water hemisphere.*
   (ii) *Old and young mountains.*

3. Make out correct pairs from the two columns:
   (a) *Highest plateau*
   (b) *The largest continent*
   (c) *The ocean around the Pole*
   (d) *A continent around the Pole*
   (e) *The largest ocean*
   (f) *An island continent*

   (i) *Asia*
   (ii) *Australia*
   (iii) *Arctic*
   (iv) *Antarctica*
   (v) *Africa*
   (vi) *Pacific*
   (vii) *Tibet*

4. Complete the following statement with the most suitable ending:
   The oceans are most important for man because
   (a) *they provide him with cheap and abundant food such as fish.*

(b) *they provide the most convenient link between continents.*
(c) *they are the ultimate source of water on the land.*
(d) *they are the largest and direct source of water for industries, irrigation and for drinking.*

5 Name the three realms of the earth. State how each one of them is useful to us.
6. What are the major land forms? Describe how they differ from one another.

Picture Reading
7. Look at the two pictures of old and young mountains. What difference do you notice in their features?

Map Work
8. Find out the areas of different oceans and continents and present them in order of their size with the help of a bar graph.

Topic for Class Discussion
9. '*Use of Mountains, Plateaus and Plains for Man*'

Find out as much information as you can about the life of people in mountains, in plateau regions and in plains. Which of the three do you like most?

UNIT TWO

Africa: The Continent of Large Plateaus

Africa stands next only to Asia in size. It consists of nearly one-fifth of the total land area of the earth. But its population is only about three-fifths that of India. There are on an average only ten persons per square kilometre, as against 160 in India.

Africa is a continent of plateaus. They are occupied by thick forests, extensive grasslands and vast deserts.

Of all the continents Africa is most tropical. It lies in the tropical and warm temperate zones. Yet there is a variety in its climates and vegetation. Africa possesses a large variety of animals. No other continent is so rich in wild life.

The continent is also rich in minerals like gold, copper and diamonds. It ranks first in its water-power resources. The important crops of Africa are millets, wheat, manioc, cotton, groundnuts, cocoa, fruits, and some spices like cloves.

Africa is known for the ancient river valley civilization of the Nile. Today it is a continent of newly independent countries. They are now busy in their economic development. New methods of farming and mining are being adopted. Modern industries are being set up. African people are now striving for their rights and status, both in their own lands and in the family of nations.

5. Land and Climate

The Terms You Already Know: *Strait*—A narrow stretch of water connecting the two large bodies of water or the seas *Isthmus*—A neck of land separating the two seas.

Look at the globe and you will notice that the equator runs almost half-way through the African continent. It is thus a continent that belongs to both the hemispheres—Northern and Southern. In which hemisphere do you see the major portion of this continent?

Name the oceans lying on the west and on the east of this continent. Which are the two seas that almost separate this continent from Europe and Asia? Note the Strait of Gibralter in the north-west. It separates the African continent from Spain in Europe. Locate the *Isthmus* of Suez in the north-west. It connects Africa with the continent of Asia. How does a strait differ from an Isthmus?

Africa, like Eurasia, belongs to the Old World. The valley of the Nile was inhabited long, long ago. The people there cultivated the land along the banks of the Nile. They irrigated crops with its flood waters. People built big temples and huge monuments like the Pyramids. They took interest in the arts and learning. They have formed big kingdoms and traded with others. Thus the people in the Nile Valley had a well-developed civilized life. An advanced stage of civilized and social life is called a *civilization*. The civilization of the Nile Valley dates back to about 6,000 years from now. It is thus one of the oldest known civilizations of the world.

Yet strangely enough, very large parts of the continent remained unknown for a very long time. The story of how the different parts of Africa were explored is long and thrilling.

Exploration of Africa

A very large portion of the African coastline remained unknown to the outside world for several centuries. Many sailors wondered if there was at all any end to the big African continent in the south. At long last, Bartholomew Diaz, a Portuguese sailor, succeeded in rounding the southernmost tip of Africa, in 1486. Later on, following the same route another Portuguese sailor, Vasco-da-Gama succeeded in reaching India. He was thus the first to discover an all-sea-route between Europe and India. This explains why the southern tip of Africa was named the Cape of Good Hope. For more than 300 years several explorers spent valuable years of their lives in exploring the unknown parts of this continent. The source of the Nile was discovered as late as in 1860.

Livingstone spent ten years in the hostile parts of the continent. They were then the most difficult parts for any traveller to explore. He travelled through the Kalahari desert, starting his journey from Cape Town. He followed the river Zambezi to the east coast. He explored the regions around the Lakes Nyasa and Tanganyika, and died while discovering the source of the Congo.

Thus, till recently the outside world knew very little about the interior of Africa. Why did the continent as a whole remain unknown for such a long time? Towards the north, the hot and dreary desert of the Sahara served as a great barrier. The great part of Africa is a high plateau rising steeply from the coast. It makes it difficult to climb from the coast to the upland. Many of the African rivers are not navigable owing to the falls along the edge of the plateau. Thick forests and extensive swamps along the coast presented yet another hurdle. Heat and humidity, insects and reptiles, and wild animals and diseases were the other hazards in the way of early explorers. Then many outsiders captured the local people to sell them as slaves. This naturally made the local people hostile to the outsiders. This explains why Africa remained a "dark continent" till very recently.

Physical Features

Look at the map of Africa. Africa is a continent of great plateaus. The plateaus of North Africa are rather low. South of the equator they are considerably higher. These plateaus have a sharp edge and a greater height towards the east. In this part, there are volcanic mountains on the plateaus. Mt. Kilimanjaro, a volcanic mountain is the highest peak of Africa. Its height is 5,895 metres above sea-level.

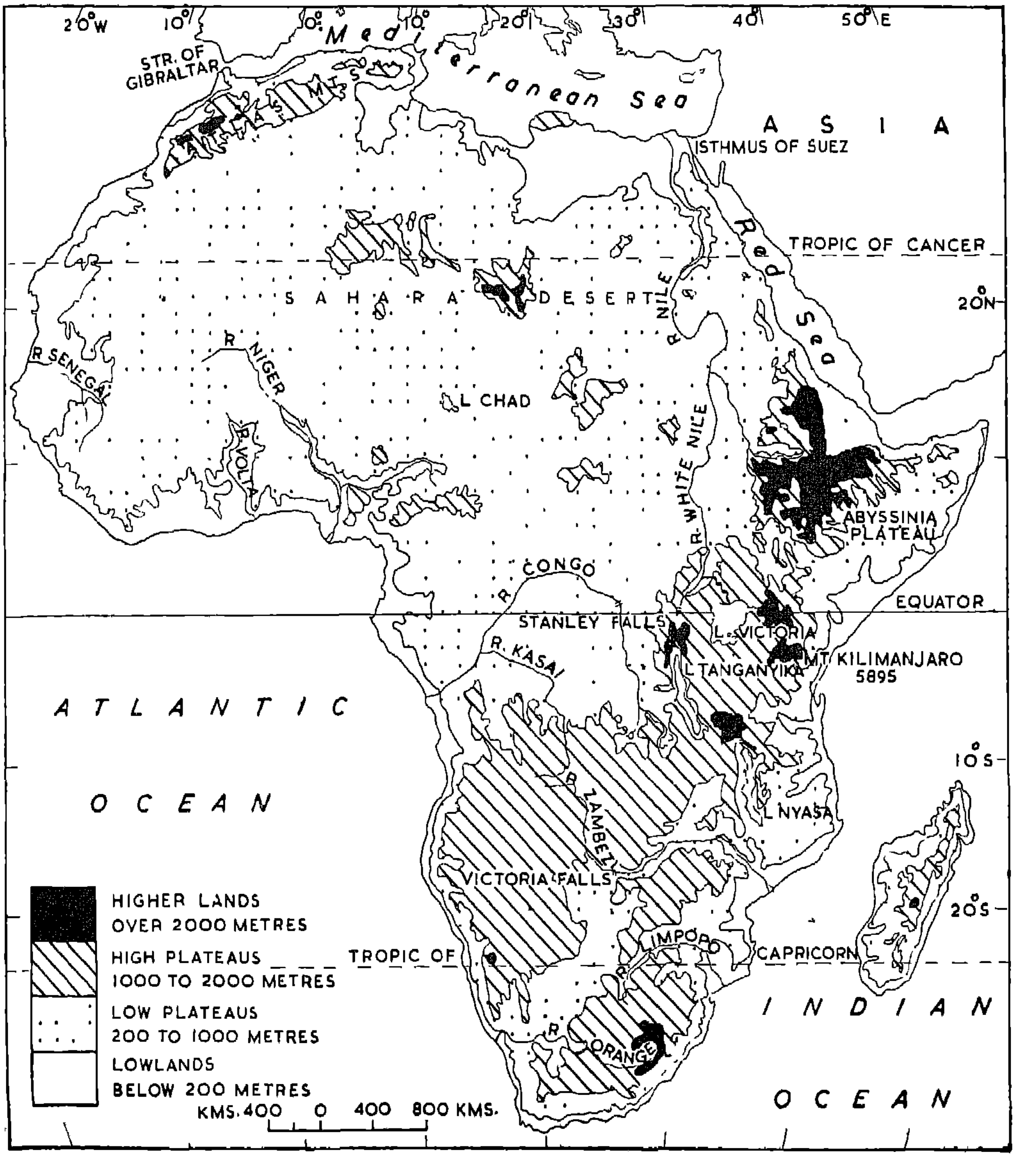


Fig. 11. Africa—Physical Features and Drainage

Note Africa is a continent of extensive plateaus. Also note the absence of coastal plains. Why are African rivers unnavigable for their major portions?

In your map you will notice a chain of lakes in this highland region. These lakes are deep and long valleys filled with water. They are due to long cracks or rifts developed in the land. Such valleys are known as *rift valleys*. The rift valleys are usually bounded by wall-like steep sides on either side. Name the important lakes lying in the eastern parts of Africa. It is generally believed that even the Red Sea, the Gulfs of Suez and Aqaba and the Dead Sea further inland in Asia are also due to rifts. This long chain of rift valleys was, of course, developed long, long ago.

The Atlas Mountains lie in the north-western part of Africa. At the opposite end lie Drakensberg Mountains near the south-eastern coast of the continent. Note the Great Sahara Desert occupying the greater part of Africa. It lies on either side of the Tropic of Cancer. In the south, the Kalahari Desert lies along the Tropic of Capricorn.

Note the Nile River rising in the rainy equatorial region. It drains into the Mediterranean Sea after flowing through a part of the Sahara Desert. The Niger is an important river of Western Africa. The Congo

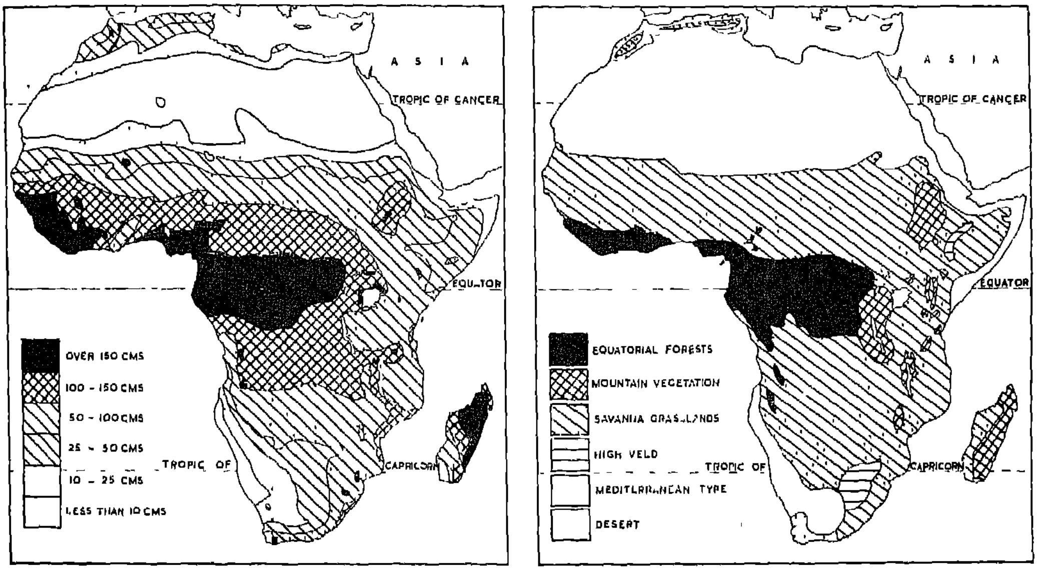


Fig. 12. Africa—Annual Rainfall and Natural Vegetation

Note the order in which the vegetation belts are found to the north and south of the equator. What relation do you find between the amount of rainfall and the type of vegetation?

is a very big river of Central Africa. It carries a huge volume of water into the Atlantic Ocean. The Orange is a west-flowing river of South Africa. The Zambezi and the Limpopo are the two major east-flowing rivers draining into the Indian Ocean. Almost all these rivers drop down to the sea in a series of steps forming waterfalls on their way.

Climate and Vegetation

The major part of Africa lies within the tropical zone. It is, in fact, the most tropical of all the continents. The temperature is, therefore, very high almost all the year round. Only in the high plateaus and mountains it is somewhat moderate. Even in the plateau region the day temperatures are high. But the nights are cool. There are marked variations in the distribution of rainfall. Hence, the variations in climate are largely due to the uneven distribution of rainfall.

The climatic belts of Africa run east-west and are arranged in a common order as one proceeds to north or south from the equator.

The belt lying close to the equator on both the sides has a hot, humid climate all the year round. It rains almost daily and there is only one season, namely, the hot-wet summer throughout the year. This is known as the *Equatorial type of climate*. There are thick forests in this region. It is a land of a varied wild life.

To the north as well as south lies the region, where there is a distinct dry period. In this belt the maximum rain occurs in summer when the rays of the mid-day sun are vertical to the ground. This climate is known as the *Sudan type of climate*. A very large part of the continent is covered by this type of climate. The forests of the equatorial region gradually begin to open up and give place to woodlands, finally merging into grasslands. The region covered with tall and coarse grasses is known as the *Savanna land*. It is the homeland of a variety of grass-eating animals and the wild beasts that live by killing them.

The grasslands of the Savanna fade into scrub lands and finally into an arid desert. In this part the temperatures are the highest. The climate is very hot and extremely dry. The rainfall is almost absent. The difference in day and night temperatures, however, is very wide, as the nights are very cool. This is known as the *Desert type of climate*.

Finally, along the northern coast is found a climate where it rains in winter. The summers are warm

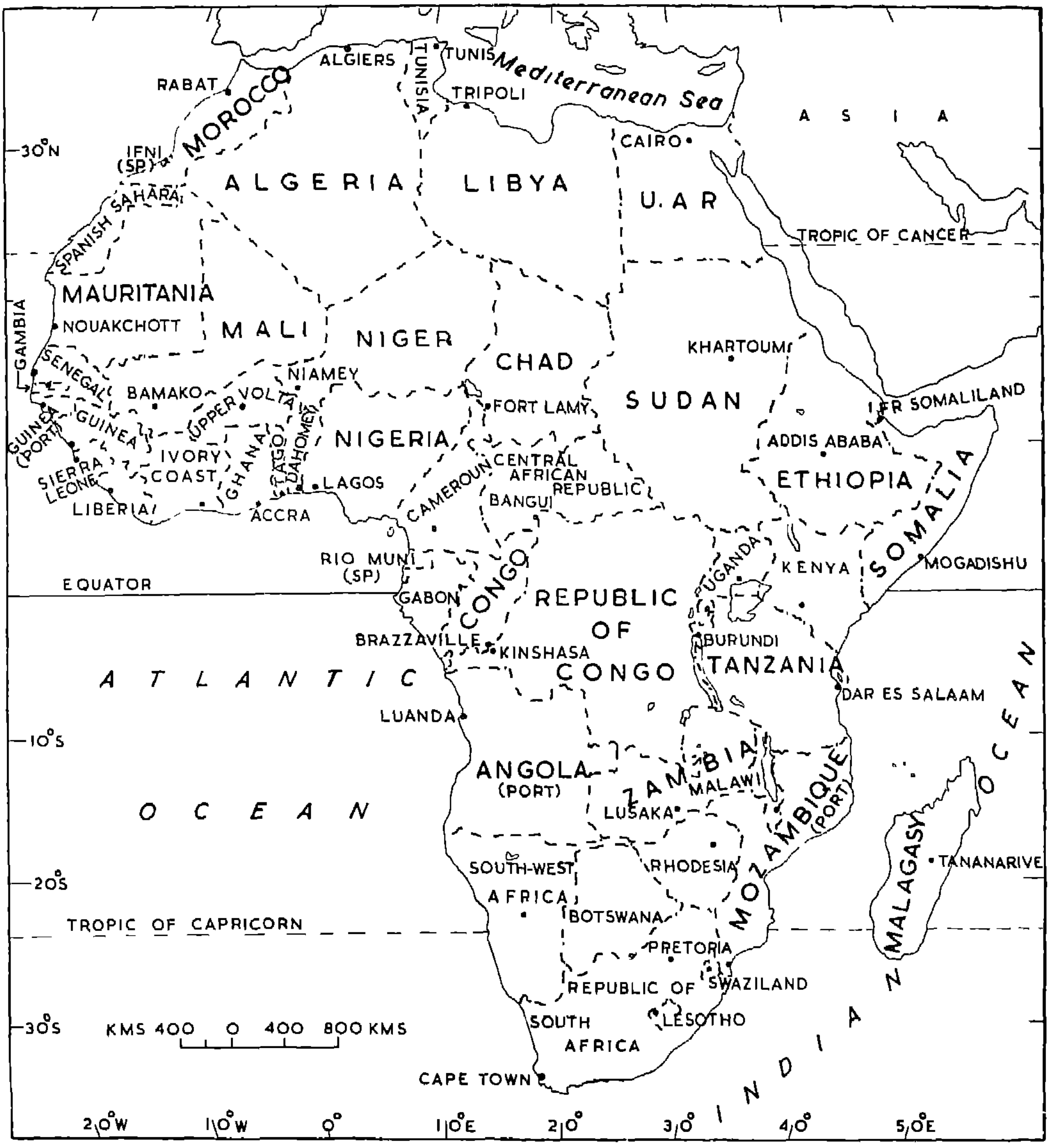


Fig 13. Africa—Political Divisions

Note the countries of the Republic of the Congo, the Sudan, the United Arab Republic and the Republic of South Africa. Name the countries that are under foreign rule

and dry. Such a climate is known as the *Mediterranean type of climate.* It is also found in the southernmost part of the continent

Political Map of Africa

Africa is a continent of countries, big and small. Many of these countries have become independent only recently. A few countries of Africa are still under foreign rule.

Look at the map and name the big island country of Africa. Which country stands on two oceans? Which is the major port of the Republic of South Africa? Name the two countries lying south of the equator and being ruled by the Portuguese people. Locate the big country that stands at the head of the Gulf of Guinea. Name five countries that are named after the rivers flowing through them. Locate two countries of North Africa that are flanked by two seas. Find out the three countries of north-east Africa that lie in the Nile basin and also stand on the Red Sea. Which two countries of Africa are named after the lakes?

The New Terms You Have Learnt: *Civilization*—An advanced stage of civilized and social life. *Rift Valleys*—Long and steep-sided valleys along the cracks or rifts developed in the land.

Exercises

Review Questions

1. Answer the following questions in brief:
   - (i) *What is the meaning of the word civilization?*
   - (ii) *Name the oldest river valley civilization of Africa.*
   - (iii) *Where is the Cape of Good Hope situated?*
   - (iv) *Which is the highest peak of Africa?*

2. Make out the correct pairs from the two columns:
   - (a) *The world's longest river*
   - (b) *An African river carrying the maximum volume of water*
   - (c) *A big African river joining the Indian Ocean*
   - (d) *A desert of northern Africa*
   - (e) *The discoverer of an all-sea-route to India*

   - (i) *Sahara*
   - (ii) *Zambezi*
   - (iii) *Livingstone*
   - (iv) *Vasco-da-Gama*
   - (v) *Kalahari*
   - (vi) *Nile*
   - (vii) *Congo*

3. Describe the physical features of Africa, giving a brief account of its plateaus, major rivers and the coastline.

4. Describe in brief the climatic and natural vegetation belts of Africa

Picture Reading

5. Study two Pictures IX and X of Africa showing the two extremes of climate. Note as many differences as you can about the climate of these two regions.

Map Work

6. In an outline map of Africa show only the major rivers What do these rivers tell you about the relief of Africa ?

Topic for Class Discussion

7. ‘*Difficulties Faced by the Explorers in Africa*’

Collect information on this topic. Tell the class the story of Livingstone and his loyal African followers.

6. The Gifts of Nature and the People

The Terms You Already Know: *Oasis*—A big or small fertile area in the midst of a desert. It is made so by the presence of water. *Waterfall*—A sudden descent of water over a big step in the bed of a river. *Wild Life*—Animals and birds leading a free life in their natural surroundings.

Africa is a continent more than nine times the size of India. But its population is hardly three-fifths that of our country. For its population, Africa abounds in gifts of nature. The natural wealth or the gifts provided by nature are known as *natural resources*. They include fertile soils, water, fuel and timber, mineral deposits, fish and wild life. The important natural resources of Africa are its forests, pastures, cultivable lands, water-power, mineral deposits and wild life. From these natural resources African people get a variety of useful products.

Trees and Plants

Trees occupy a very important position in the economic activities of the people. Some of them yield timber. But even much of the agricultural produce in Africa is obtained from trees. As a result, they are carefully nursed and cultivated over large areas.

Very large parts of Central Africa are covered with thick forests. But the valuable trees among them are mahogany, ebony and kapok. They yield hardwood that may be used as timber. Rubber trees grow wild in the equatorial forests. Efforts are now made to plant these trees properly and export the rubber they yield.

Three different varieties of palm trees are found in Africa. They are coconut-palm, oil-palm and date-palm. The coconut-palms are found in equatorial islands like Zanzibar and Pemba and along the coast of Tanzania. They yield copra from which coconut-oil is also obtained. Oil-palm is more common in tropical West Africa. Oil derived from its oil nuts is an important item of export from tropical Africa, especially Nigeria. The date-palm belongs to the oasis in the desert regions of Africa. It serves as an important item of food for the people in this region. The sweet dates which the trees bear are exported from the desert lands, especially the United Arab Republic.

Africa possesses a variety of trees from which drinks are obtained. They are coffee, cacao, tea and kola trees. A coffee tree grows wild in the highlands of Ethiopia. Coffee powder obtained from its beans is of high quality. It is now cultivated in parts of East Africa mainly for export. But more important than this is a cacao tree introduced from Latin America. It belongs to the equatorial lowlands. It is highly useful for its pods which yield cocoa powder. Like coffee, it is also a popular drink. It earns a good deal of money for the tropical countries of West Africa, particularly Ghana and Nigeria. From the nuts of kola trees are prepared several cola drinks. Its nut is used as a chewing-gum. To this group of trees is now added a tea plant from Asia. Tea is grown in Kenya and Mozambique.

Among the useful fibre plants of Africa may be mentioned cotton and sisal. The Nile Valley is famous for the world's best cotton. The United Arab Republic and the Sudan are the major exporters of cotton from Africa. Sisal is a wild plant of East Africa. Its leaves yield fibre comparable to that of jute. Tanzania is the leading exporter of sisal fibre in the world.

Africa possesses a variety of fruit trees. In the tropical regions the banana, pine-apple, papaya, jack-fruit, grape-fruit and mango are common. It also grows the citrus fruit like the lemon, lime and orange. Along its Mediterranean coast in the north and in the Cape Province in the south, it has olives, apples and peaches. Also well known are the vineyards from which grapes and raisins are obtained. In parts of eastern Africa is found a cashew tree. The pods of the tree are exported mainly to India, where they are processed and their kernel is skilfully separated. They are the cashewnuts which we like so much.

Africa is famous for one more tree, namely the clove. The cloves which we use mainly as spice are small buds of this tree. The Zanzibar and Pemba islands are the largest producers and exporters of cloves in the world.

Africa cultivates tobacco and groundnut, again mostly for export.

They were introduced in this land from America. Africa produces nearly one-fourth of the world's groundnut. It also cultivates sugar-cane. Natal Province of South Africa and the United Arab Republic are the main cultivators of sugar-cane.

Cereals like wheat, and millets like sorghum have been grown in Africa for a long time. It now also cultivates rice and maize. These cereal producing plants belong to a family of grasses. In course of time man has selected them and improved their breed carefully to increase their yield. Unlike Asia and Europe, Africa is not a very important producer of cereals. Cassava is an important food plant of equatorial Africa

Wild Life and Domestic Animals

Wild life is a pride of Africa Its dense forests and extensive grasslands are an ideal home for a variety of birds and animals. The dense equatorial forests are inhabited by a variety of monkeys and apes like chimpanzees and gorillas. These intelligent and at times naughty animals live on fruits and nuts so readily available in these forests. A large number of birds with their bright colours add to the beauty of the forests. Poisonous snakes and dangerous pythons inhabit these jungles. Muddy waters are the haunts of fearsome crocodiles and ugly hippopotamuses. The awkward looking rhinoceros is at home in swampy lands Herds of elephants and wild buffaloes are found in jungles and woodlands. The forests and grasslands are infested with wild beasts such as tigers, leopards and lions.

The deer, stag, zebra and giraffe belong to an open woodland On these grass-eating or *herbivorous* animals thrive the *wild beasts* of Africa, particularly the lions and tigers. To the desert regions of Africa belong the camel and a fast-running bird, the ostrich.

These wild animals are hunted for their flesh. They thus serve as a source of food for the local people. In addition to this, their skins, bones, horns, tusks and feathers often fetch handsome amounts. Many of them are caught alive when they are young and sold for being kept in zoos. You must have seen them even in a circus. A large number of people from all over the world visit parts of Africa to hunt these animals or observe them in their natural surroundings. Large amounts of money spent by the tourists become yet another source of income for the local people.

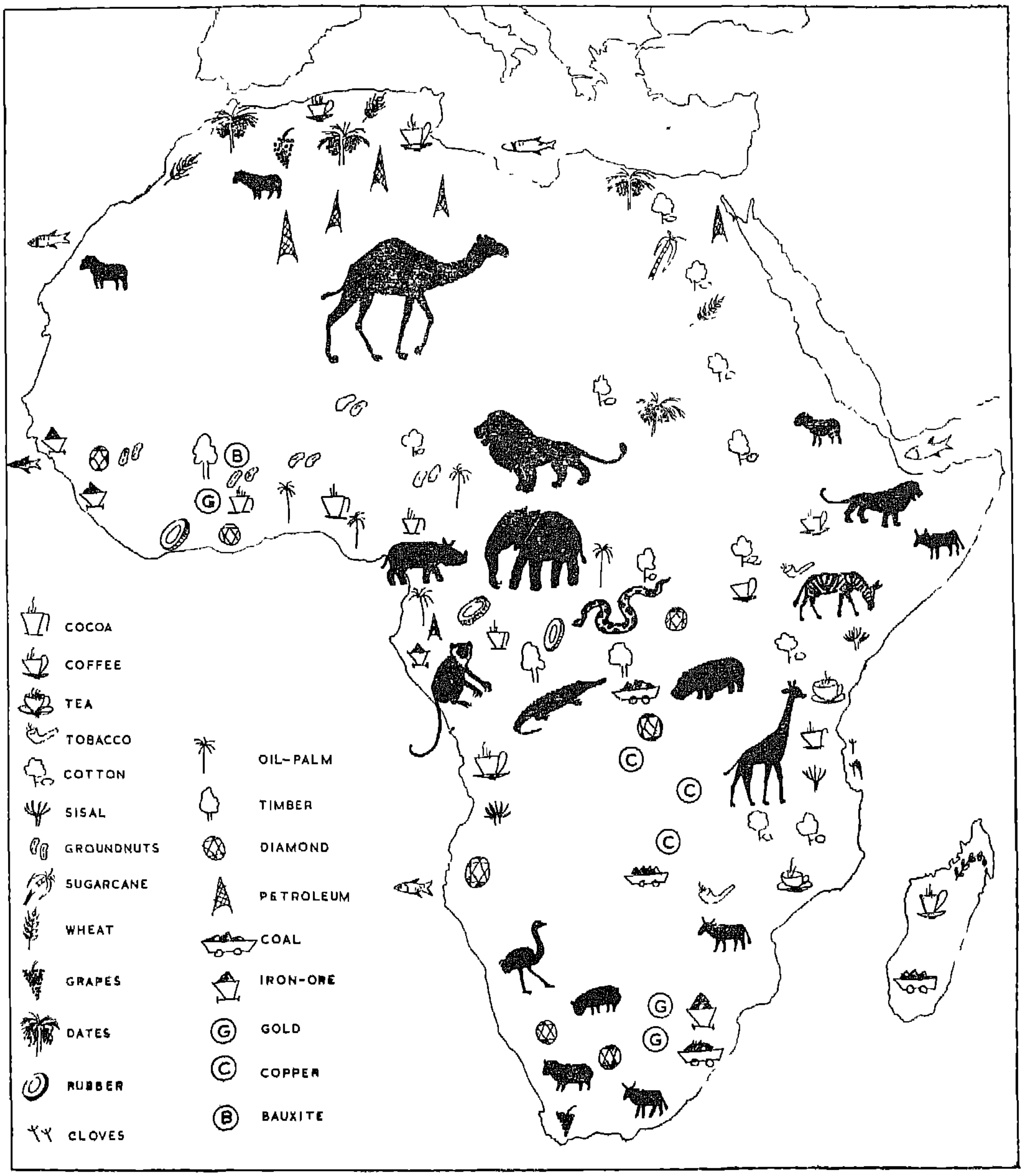


Fig. 14. Africa—Crops, Minerals and Wild Life

Note the crops, minerals and wild life of Africa. Where are most of the minerals located in Africa?

Africa has vast grasslands. They are used for grazing and rearing domestic animals, mainly cattle, sheep, goats and camels. The savannas are known for cattle-rearing. However, the best cattle for beef and dairy are confined to the cool, humid climate of South Africa. Sheep are common on the dry parts of the Veld. Goats, camels and horses are reared in the semi-arid regions.

Water-power and Mineral Wealth

Africa is very rich in its water-power resources. Large parts of Africa receive plentiful rains. Rivers flowing through these regions carry huge amounts of water all through the year. The rivers generally drop down to the sea through a series of steps from the high African plateaus. This has given rise to a large number of waterfalls. They provide natural head or steep fall of water so essential for developing water-power. Water is a very important and an ever lasting source of power. Africa, especially the Congo basin, is very rich in water-power.

The Kariba Dam on the Zambezi is the largest producer of water-power in Africa. The new Aswan Dam on the Nile in the United Arab Republic is another very big dam being built at present.

Africa is very rich in several minerals. It is the world's leading producer of precious minerals like diamonds and gold. It supplies more than 95 per cent of the world's diamonds. Diamonds are known for their extreme hardness. Therefore, most of them are used for industrial purposes. The others that can be cut into different attractive shapes are used as precious stones in jewellery. The bigger the shape and the brighter its lustre, the greater is the price of the diamond. South Africa and the Republic of Congo are the leading producers of diamonds.

More than half the world's gold supply comes from Africa. This precious metal is used for making ornaments. Its greatest use, however, lies in the promotion of international trade. All international payments are made mainly through gold. The Republic of South Africa is the major producer of gold in Africa.

The African reserves of cobalt, copper, manganese and bauxite are also abundant. Copper is in great demand for electric wires. Manganese is mixed in steel to make it stronger and more durable. Such steel is used in making rails and big machines. Bauxite yields aluminium. For this, it requires abundant electricity at a low cost Aluminium is used in making aeroplanes. Africa possesses very large reserves of uranium. This mineral has now become very important as it is used for developing atomic energy. Again, South Africa and the Congo are the leading producers of uranium in Africa. This continent has some iron and coal deposits. Recently, reserves of mineral oil have also been located, mainly in the Sahara Desert. Look at the map and find out the location of various mineral deposits. Which countries are important producers of bauxite, manganese, copper, coal and iron?

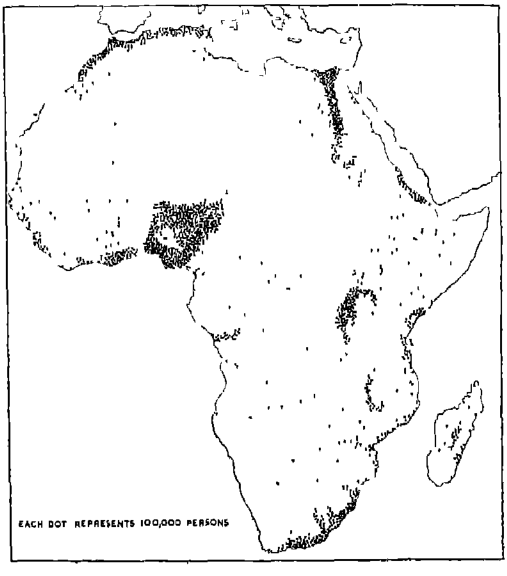


Fig. 15. Africa—Population
Note the distribution of population. How will you explain large vacant places?

People and Transport

The total population of Africa is about 300 million. If it can be spread uniformly all over the continent there would be only ten persons per square kilometre. In other words the *average density of population* in Africa is 10 persons per square kilometre. Thus it is a thinly populated continent. But it must be remembered that the actual distribution of population is very uneven.

Look at the population map of Africa and note the vast vacant places which are almost uninhabited. The Sahara Desert in the north, the Kalahari Desert in the south and the equatorial forest region in the central part are the regions with very thin population. Why are these regions so thinly populated? How will you explain the dense population in the Nile delta, the Nile valley and the parts of Guinea States in West Africa?

The African population consists of four important racial groups. They are the Pygmies, the Bushmen, the Negroes and the Arabs or the Caucasians. The Pygmies are confined to the interior of the rainforests of the Congo. They are dark people of a short stature. The Bushmen belong to the Kalahari Desert of the south. Both these peoples are the oldest inhabitants of Africa. They live by hunting animals and gathering fruits Theirs is a simple life as was followed by the early man They seem to have been driven away from the other parts of the continent by more powerful tribes.

The Negroes predominate most parts of Africa south of the Sahara. They belong primarily to the grasslands of Africa They are mostly herdsmen and farmers. They are divided into numerous tribes, each one having its own language. The Bantus are the most important and the biggest group of the Negroes. The people along the Gulf of Guinea are fairly advanced among the Negroes of the continent.

Arabs, the people of the Caucasian race, belong to Africa north of the Sahara. Most of them follow Islam and speak Arabic dialects. The people of Madagascar island are of Asian origin

For a long time, Africa was ruled by a few European countries. Today most of the African countries are free. They are now trying hard to improve their lot. They have taken to modern science and industry With large natural resources at their disposal Africa is a continent of great promise

The means of transport in Africa are yet to be developed. The extensive rocky and sandy deserts and thick forests have stood in the way of a good land transport system. Only a few camel tracks cross the deserts. Rivers are the only natural lines of communication in the forests The division of Africa into too many small countries has also checked the growth of good roads and railways. The river-falls along the edge of the plateaus have made rivers largely unnavigable. Only the rivers Congo and Nile are navigable in parts. In Africa, air-transport is becoming more and more important

Look at the map and find out the networks of railways in South Africa, East Africa, North-east Africa and West Africa. Locate on the map two world sea-routes, one passing through the Suez Canal and the other around the Cape of Good Hope.

The New Terms You Have Learnt: *Natural Resources*—The gifts provided by nature, such as fertile soils, water, fuel and timber, mineral deposits, fish and wild life *Average density of population*—The number of people that can be found in a unit area such as a square kilometre if the total population is uniformly distributed in a given region

Exercises

Review Questions

1. Answer the following questions in brief:
   (i) *Name the important four races of Africa.*
   (ii) *What are the leading mineral exports of Africa?*
   (iii) *Which are the thickly populated parts of Africa?*

2. Listed below are various trees and plants found in Africa. Group them in the following categories:
   (I) Harwood trees; (II) Trees useful for making soft drinks; (III) Fibre plants; (IV) Citrus fruits; and (V) Cereal plants.

   (i) Sorghum, (ii) Ebony; (iii) Kola; (iv) Oranges, (v) Wheat; (vi) Mahogany; (vii) Sisal; (viii) Lime; (ix) Cotton; (x) Cacao.

3 Give an account of wild life in the equatorial forests and in the grasslands of Africa

4. In what minerals is Africa very rich? Where are they found? State the use of each one of them

Picture Reading

5. Study Picture XII of the Suez Canal. Which two seas does this canal connect? What kind of climate does the landscape in the picture suggest?

Map Work

6. On a big outline map of Africa, paste pictures of animals and food products obtained in different areas.

Topic for Class Discussion

7. '*Cape-Cairo Railway*'

   There was a proposal to build a Cape-Cairo Railway. Imagine you are travelling along this railway. What things would attract you most?

UNIT THREE

Africa: Some of its Lands and Peoples

Africa is a continent of many countries, big and small. Most of them have become independent only recently. They are all engaged in improving their agriculture and setting up new industries. Yet not all of them are free from foreign rule. A few of them are ruled by the white settlers who are in small minorities

The Congo belongs to the equatorial belt in Africa. It is a land where nature is most bountiful. Man's needs are few and can be met easily. It is a country rich in natural vegetation, wild life, and in mineral and water-power resources.

Tanzania too is situated in the equatorial Africa. But it differs from the Congo in more ways than one. Unlike the Congo, Tanzania consists of a highland where the climate is moderate and rainfall low.

Nigeria and the Ghana are the two countries of West Africa. They are partly in the equatorial region and partly in the savanna The rainfall is moderate; and there is also a dry season. Man has to exert himself a bit to make his living. There is a greater variety of crops in Nigeria than in Ghana.

The United Arab Republic is a country that belongs to the Great Sahara Desert. The country, however, owes its prosperity to the Nile. It is known for its ancient civilization and has served as a bridge between Asia and Africa. Today, its Suez Canal provides a link between the countries of the east and those of the west.

The Republic of South Africa, is the most prosperous country of the African continent. It is a land known for gold, diamonds and animal products. It is, however, ruled by a small minority of the white settlers.

7. A Forestland and a Grassland

The Terms You Already Know: *Evergreen forests*—A group of trees that do not shed their leaves all at a time. As a result, these forests always look green *Cassava*—An important food plant of the equatorial region. Foods such as manioc and tapioca are obtained from its roots

The Republic of Congo and Tanzania are the two countries of the Equatorial Africa. Whereas the Congo is a forestland, Tanzania is a grassland. Although they differ in more ways than one, both the countries are peopled by the Negroes mostly of the Bantu tribes.

Congo

The country owes its name to its great river, the Congo. The Congo is about three-fourths of the size of India, but has a population which is even less than that of Kerala State in India. Look at the map and find out the latitudes of this country. Notice its narrow coastline on the Atlantic Ocean.

Land and Climate

The Republic of Congo is more or less confined to the Congo basin. An area drained by a single river together with its tributaries is known as a *river basin.* It is a saucer shaped depression flanked by the Great African Plateau. The Congo is one of the world's largest rivers. It is navigable only in parts as it forms a series of rapids and falls on way to the sea. *Rapids* are small falls.

The Congo is a region of great heat, high humidity and abundant rainfall. It is hot all the year round with little difference in temperature from month to month or between day and night. Even at night there is hardly any relief from the oppressive heat. As a result, people hardly need any clothing.

Most of the Congo basin is occupied by dense evergreen forests. The heat and heavy rainfall of this region cause plants and trees to grow

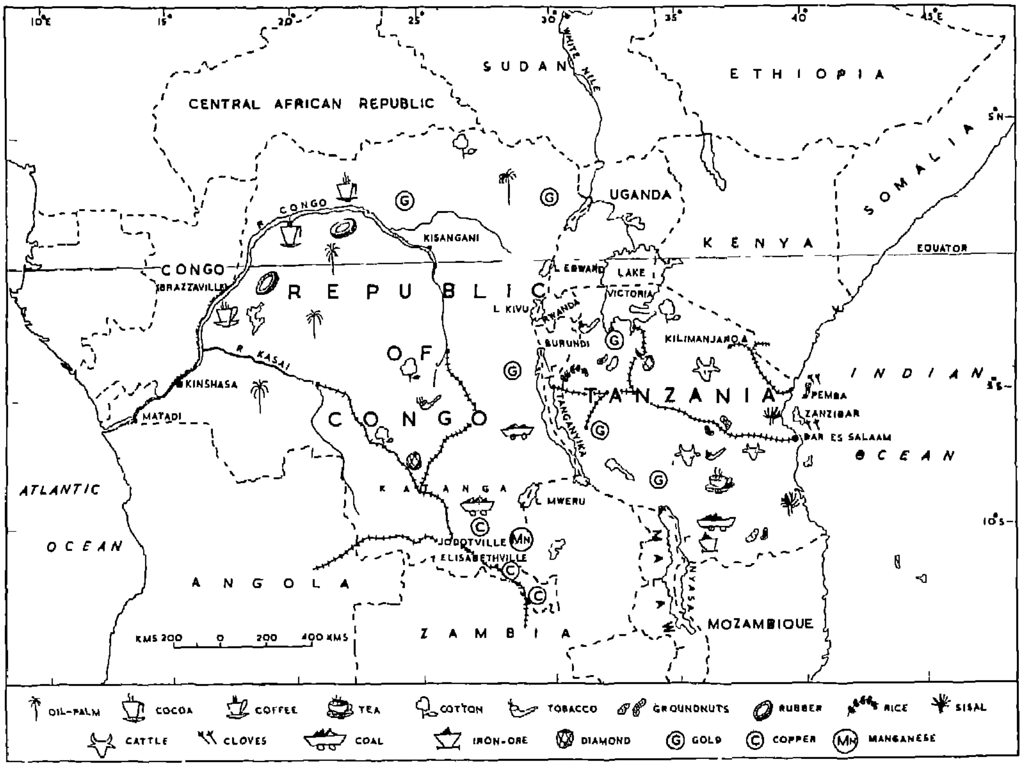


Fig 16 The Congo and Tanzania

Note the latitudes in which the two countries are situated. Do these countries face in opposite directions? If so, how?

very rapidly. The forests consist of large and tall trees vying with one another for sunlight. As a result, trees with a height of 40 metres or more are not uncommon. Trees of several species are found even in a very small area. Beneath the tall trees one finds several small trees and still below them is a mat-like green cover of grasses, shrubs and climbers. It is called *undergrowth*. It makes the jungles most difficult to move about. Deep rivers are the only natural ways through which these forests can be combed. Even the rays of the sun never penetrate into the lower parts of the forests. A kind of greenish twilight reigns there even on the brightest day. The forests are dark and gloomy. Such are the *equatorial rain-forests* of the Congo.

The Congo is very often called a gigantic zoo. What different types of animals will you expect in the thick evergreen forests and in its marshy lands and rivers? Do you think that the Congo is really a gigantic zoo?

Economic Development

Agriculture and mining are the main occupations of the people in the Congo. The country has about one-fifth of its total land under crops. More than three-fourths of the population is engaged in agriculture. Cassava, maize and bananas are the main food crops of the forest region, with rice in some river valleys. Millets and groundnuts are the chief crops in the savannas, the region surrounding the equatorial forest zone.

Cassava is the chief food of many people of this country. The cassava plant grows to a height of about a metre and a half. It has thick roots about a metre deep into the ground. It takes two to three years for the roots to grow fully. When fully grown, the roots are dug up and their skins are peeled off. Later they are allowed to soak in water. They are then dried and pounded into flour in wooden pestles.

The farmers in the forest regions of the Congo clear patches of land by burning the trees. They furrow the ground with hoes, and cultivate maize, cassava, sweet potatoes and other food crops. But in a year or two the land loses its fertility or is overrun by weeds It is then given up and a fresh clearing is made in the forest. In due course, the old patch of land is cultivated again when the natural growth has restored its fertility. This is known as *shifting agriculture*. Obviously it is a wasteful method of farming.

Rubber, cotton, coffee and oil-palm are the new cash crops grown chiefly for export. Large herds of cattle are reared on higher grounds, especially in the savanna.

Mining is another important activity for a very large population. About two-thirds of the Congo's exports consist of minerals. Most of the minerals are found in the Katanga province in the south. The Congo produces nearly half the world's cobalt and industrial diamonds. Other important minerals are uranium and copper, tin, gold, zinc and manganese. This country leads the world in water-power resources. But they are yet to be tapped.

In the Congo, agricultural raw materials and minerals are processed on a large scale for their export. The country has made a good deal of progress in these industries. The chief industrial products produced and consumed in the country are textiles, cement, soap, cigarettes, and drinks. Its industries are located mainly in Jodotville, Elizabethville and Kinshasa (Leopoldville).

People

The Congo has a population of 15 million people. But its huge size gives it a very low average density of only 7 persons per square kilometre.

The Bantu-speaking people are the most numerous, and comprise nearly two-thirds of the total population. They are divided into several tribes. They usually live in small compact villages by the side of lakes and rivers in the forests

A large number of Pygmies also live in the Congo. Their houses are made of branches of trees, twigs, leaves and grasses. These short people prefer to live in the interior of the forests They grow no crops and live mainly by hunting and collecting honey, fruits and roots from the forests. They get the other things they need, by exchanging meat with the neighbouring villages.

Kinshasa (Leopoldville) is the largest city and capital of the Congo Republic. It has a population of about 400,000 people. Other important towns are Elizabethville, and Kisangani (Stanleyville) Matadi is the chief port of the country. It is a river port situated on the Congo.

Tanzania

The United Republic of Tanzania is the largest country in East Africa. It consists of Tanganyika and Zanzibar. It is flanked by the Indian Ocean on the east. The total area of Tanzania is a little more than one-fourth the size of India.

Land and Climate

Most part of the country is a plateau with a few mountain ranges. Mount Kilimanjaro, the highest mountain peak in Africa is on its northern border. It is a volcanic mountain whose summit is always covered with snow.

Although Tanzania is situated very close to the equator, only the islands and coastal lowlands have a hot, humid climate. On the higher parts of the plateau the climate is moderate, and the rainfall is rather scanty. Most of the people live in the rainy areas, and cultivate a variety of crops.

The coastal strip is covered with mangrove swamps and coconut-palms. Behind this strip is a stretch of thick forest. This in turn fades into the open woodlands and the savanna grasslands on the plateau. The savanna grasslands are the homeland of a variety of wild life, including the elephant, lion, giraffe, zebra, hippopotamus and rhinoceros. Tourists from all over the world visit Tanzania either for hunting these wild animals, or for observing them in their natural surroundings. It is always a great fun to observe, from a safe distance, wild and dangerous animals in their natural surroundings.

Tanzania has several reserved forests or woodland areas. No one is allowed to fell trees, graze animals or hunt wild life in these reserves. These areas known as *national parks* are thus reserved for the preservation of natural vegetation and wild life. Big game hunting is allowed in some of them under strict control.

Economic Development

Agriculture is the main occupation of the majority of people in Tanzania. About one-tenth of the total area of the country is under cultivation. Maize, rice, sorghum, cassava and beans are the main food crops of Tanzania. Cotton, coffee, tea, coconuts, tobacco, cloves, cashewnuts, groundnuts and sisal are the main cash crops. They are grown on large farms, mainly for export.

Tanzania is the largest producer of raw sisal. Sisal is a plant useful for its fibre. The plant has long and spiny leaves. It thrives on poor sandy soils. The young plants are first reared in a nursery and are then planted in rows in large fields. Cutting begins during the third or fourth year. The mature leaves are cut off, and crushed by machines until only the fibre is left. The fibre is dried and then made into rope, twine and nets.

Many kinds of tropical fruits are grown in the islands of Zanzibar and Pemba. However, the cloves and coconuts are their chief crops. These islands produce about nine-tenths of the world's cloves. The clove trees grow to a height of about twelve metres and have long leaves, dark and shining. The creamy-pink buds of the tree are picked just before they burst open. The clove harvest season is an extremely busy time because there is a very short period in which the picking must be done. May and November are two seasons for picking cloves in both the islands.

Tanzania is an important cattle rearing country in Africa. But the

VIII. Cotton in Tanzania

Tanzanian women are carrying cotton to the market. Look at the attractive designs of their clothes made of cotton. What kind of landscape do you see in the picture? How must be its climate?

activity is handicapped by the tsetse flies. Tsetse is a disease-carrying fly whose bite kills cattle and causes sleeping sickness among human beings.

The mineral resources of Tanzania are fairly large and widely dispersed. Diamond is the most important mineral export. Gold, copper and lead are the other less important minerals.

Tanzania possesses several sisal spinning mills. It also manufactures bicycles, tyres and matches

People

Although Tanzania is a little less than one-third the size of India it has a population, less than that of Assam. The average density of population is just 11 persons per square kilometre. But the islands have a dense population.

The population is mainly composed of several Negro or Bantu tribes. *Swahili* is the common language of the people. A small proportion is made up of the Masai people engaged in animal rearing. They move from place to place with their animals. Such people are called *nomads*. Other people of Tanzania are the descendants of the Arabs, Indians and Pakistanis. Dar-es-Salaam, which means the harbour of peace, is the capital city and the principal port of Tanzania.

The New Terms You Have Learnt: *River Basin*—A large area drained by a single river and its tributaries *Shifting Agriculture*—Practice of bringing new land under cultivation by giving up the old farms when they lose fertility and are over run by weeds. *National Park*—A reserved area for preserving its natural vegetation, natural beauty and wild life. People visit these places to see wild animals in their natural surroundings.

Exercises

Review Questions

1. Answer the following questions in brief:
   - (i) *How did the two countries of the Congo and Tanzania receive their names?*
   - (ii) *What is an evergreen forest?*
   - (iii) *Name the two leading exports of the Congo and Tanzania.*

2. Why is the Congo called a gigantic zoo? Describe the natural vegetation and wild life in the equatorial rain-forest.

3. Why is Tanzania called a land of big game? What is a national park?

4. Explain how cassava and sisal are grown. Also, mention the uses they are put to.

5. What is the important crop of Zanzibar? How is it grown and harvested?

6. Give an account of the climate of the equatorial region.

7. What is meant by shifting agriculture? Why is it not a good method of farming?

Picture Reading

8. Compare Pictures VIII and IX. What differences do you notice regarding land, vegetation, climate and occupations of the people in the two regions?

Map Work

9. In an outline map of the Equatorial Africa show the two countries of the Congo and Tanzania, their rivers, lakes, high peaks, minerals, crops and cities.

Topic for Class Discussion

10. '*The Congo and Tanzania*'

Divide yourselves into two groups one for the Congo and the other for Tanzania. Let each group talk about the relief, climate, vegetation, animal life, minerals, crops and people of its country, point by point. At the end list the points of similarities between the two.

8. Lands of Oil-palm and Cocoa

The Terms You Already Know: *Cash Crops*—Crops grown by the farmer not for his own consumption but mainly for the cash they bring him on sale.

Nigeria and Ghana are the two important countries of West Africa. Situated not far from the equator, large parts of these countries are occupied by rain-forests. These hot and well-watered tropical lands are the world's largest suppliers of palm-oil and cocoa. They are also the thickly populated countries of Africa.

Nigeria

Nigeria is one of the large countries of Africa. It is nearly three times the size of the Maharashtra State in India. In total population it compares favourably with the State of Bihar. But even so, it leads all the other countries of Africa.

Land and Climate

Nigeria is a country of lowlands and plateaus. The coastal strip is a swampy lowland covered with mangrove forests. To its north lies a land which is alternately up and low. A land thus looking like waves is called *undulating*. It is covered with rain-forests. Further north lies the Plateau of Jos, where the woodlands gradually give place to the savanna grasslands. The extreme north of the country approaches the desert of the Sahara.

The Niger is the most important river of Nigeria. It drains the greater part of Nigeria before it empties itself into the Gulf of Guinea. The north-eastern part of the country is drained into the Lake Chad. It thus forms part of an inland drainage. An *inland drainage* consists of river systems whose waters do not reach the ocean.

Coastal Nigeria has an equatorial type of climate. As one proceeds inland one finds two clear-cut seasons. There is a rainy season from May to October. The rains are brought by the south-west winds. It reminds us of the monsoon rains in India. The rest of the year is dry when north winds are common. These dust-laden winds of the north are hot and dry. The rainfall is very heavy along the coast, especially towards the east. It decreases gradually as one moves inland.

Economic Development

Nigeria is mainly an agricultural country. Nearly three-fourths of its population is engaged in agriculture. The major part of its land is under food crops that are consumed locally. They include yams, manioc, corn, millets, rice and beans. Nigeria is self-sufficient in food. The country, however, is very important for some of its agricultural exports. It is the world's largest exporter of palm-kernels, palm-oil and groundnuts. It is the second largest producer of cocoa. It also produces cotton, rubber, tobacco and bananas.

An oil-palm tree thrives well in the equatorial climate. It takes fifteen years to grow to a full height of about twelve to thirteen metres. The fruits of the tree grow in clusters. Oil is extracted both from the hard nut and the pulpy layers covering the nut. Oil from the pulp is extracted locally by simple crude methods. It is used in making soap, candles and hair-oil. The oil derived from the nuts is superior in quality. It is extracted by machines and is used in making margarine, a vegetable oil, used in cooking.

Animal rearing is important in the savanna lands of the north. Cattle, goats, sheep and pigs are the common domestic animals. The country is an important exporter of hides and skins. The forests provide rubber, fuel and timber. In fact, timber is one of the important items of export from Nigeria.

Tin and columbite, are the important minerals found in Nigeria. They are exported on a large scale. It also possesses deposits of coal and mineral oil. Its exports of mineral oil have been steadily increasing in recent years. Big dams are being built across the Niger and its tributaries. They would provide hydroelectricity on a large scale.

Nigeria has set up several new industries. They include textile mills, food processing plants, oil mills, cigarette and rubber factories and a motor-car plant at Apapa. It has also a few metal works. The country has several small-scale industries like pottery, weaving, leather goods and wood work.

People

Nigeria has a population of 56 million. It is the highest for any single country in Africa. It gives this country an average density of 61 persons per square kilometre. Its northern part is more thickly populated than the rest of the country. It is a land of the peoples following different religions. Most of them are Negroes consisting of several tribes. Nigeria is also a land of many languages.

A fairly large number of people in this country live in towns. There are twenty-three towns with a population of 100,000 or more.

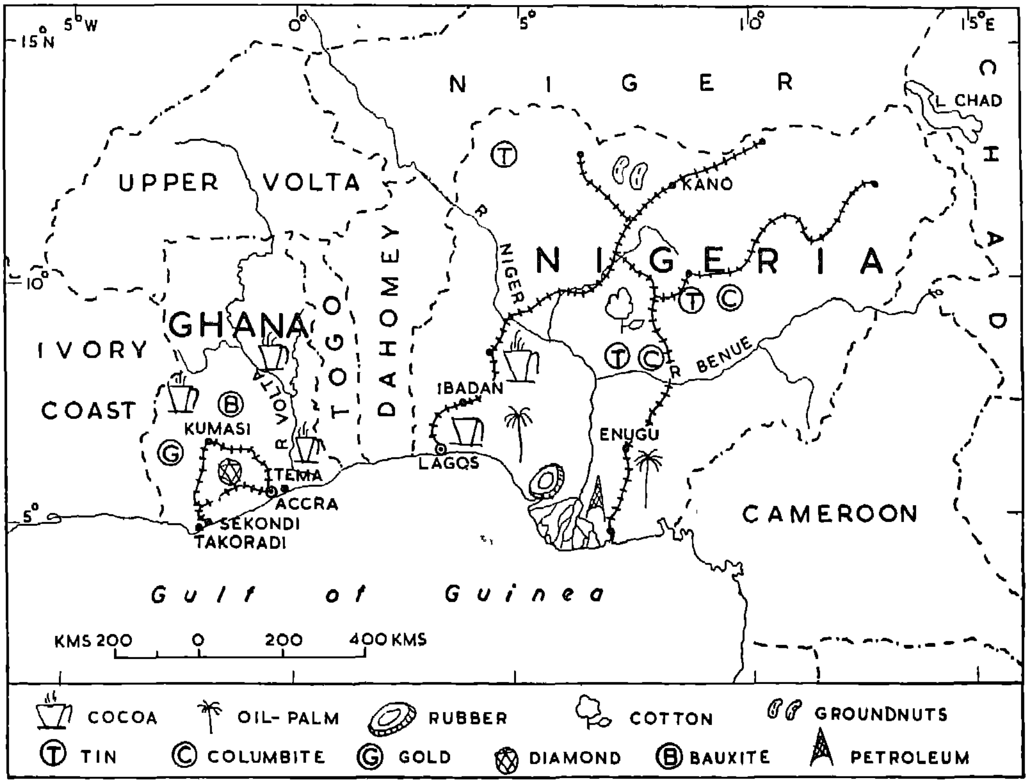


Fig 17. Ghana and Nigeria

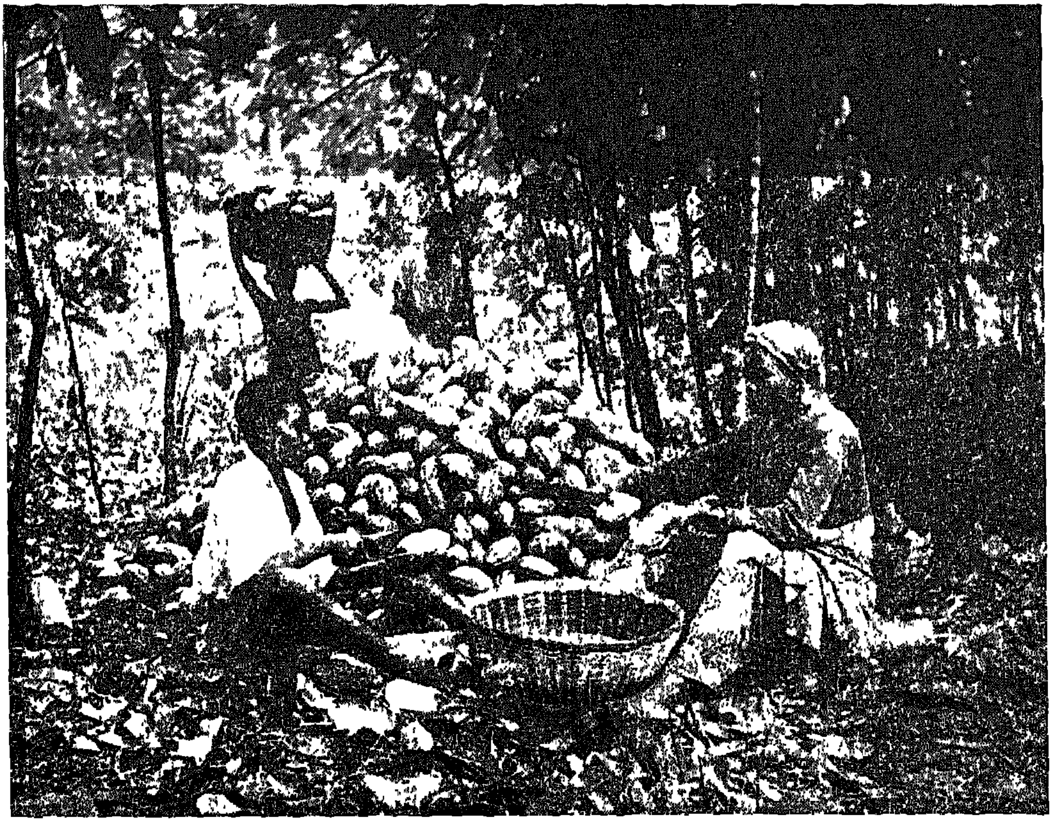
Ghana and Nigeria are countries with considerable lowlands. They are drained by the Rivers Volta and Niger, respectively. In what latitudes do the two countries lie?

Lagos is the principal port town and the capital city of Nigeria. It lies in the western part. Ibadan is the regional centre of the western part of the country. Kano is the chief town of the northern region. Enugu is the important town of the eastern region.

Ghana

Ghana is a land slightly bigger than the States of Mysore and Kerala put together. In population, however, it is even less than half of Kerala. Till recently the country was called Gold Coast. It received this name because of the gold found in the country.

Ghana consists of a coastal lowland backed by a broad plain. The Volta is the major river of Ghana. Climate of Ghana is very much the same as that of Nigeria.



IX Breaking Cocoa Pods

Look at the woman and her children engaged in breaking pods with a long knife. What are their clothes and baskets made of?

Economic Development

Agriculture is the main occupation in Ghana. Nearly two-thirds of its population is engaged in agriculture. Cocoa is the most important crop of the country. This crop was introduced in Ghana from Brazil about 90 years ago. Today Ghana is the largest producer and exporter of cocoa.

Cacao is the name of a tree from which cocoa is obtained. It is a crop of equatorial lowlands, requiring a hot-moist climate. Its young plant needs shelter both from wind and direct sun. It is, therefore, generally grown under a shady tree. The cocoa tree grows to a height of five to eight metres. Large pods containing beans grow on the tree trunk not very high above the ground. Green pods grow to a size of 15 to 25 centimetres. When ripe they turn into yellow or red. The crop is harvested from October to January.

Each pod contains 30 to 40 beans. The beans when separated from pods are allowed to 'sweat' or *ferment* for a week. During this period they are covered with banana leaves or kept in special boxes. They are then dried in the sun for about ten days before they are packed in sacks for export. Cocoa powder is obtained by grinding beans. It is used in making chocolate and confectionary. Cocoa accounts for nearly three-fifths of the total exports of Ghana.

The Government of Ghana is now encouraging cultivation of other crops like rice, maize, cotton, tobacco, rubber, coffee and oil-palm. This will reduce its over-dependence on a single crop.

Ghana has rich mineral deposits of gold, diamonds, manganese and bauxite. They are all mined and exported. A huge dam on the Volta provides electricity for its new industries. It also irrigates coastal lands near Accra. Ghana now produces aluminium from bauxite with the help of electricity. The plant is located at Tema.

People

The total population of Ghana is 7 7 million. This gives this land an average density of 32 persons per square kilometre. This is nearly half that of Nigeria. The people of Ghana are mainly Negroes, consisting of various tribes. Accra is the capital city of Ghana. It has a population of about half a million people. Kumasi, Sekondi and Takoradi are the other big towns. Both Accra and Takoradi are big ports. They are known for their exports—cocoa, timber, gold, diamonds and manganese. Their chief imports are food stuffs, textiles, chemicals and machinery.

The New Terms You Have Learnt: *Undulating land*—A land which is alternately up and low like the waves. *Inland drainage*—A river system whose waters do not reach the ocean

Exercises

Review Questions

1. Answer the following questions in brief:
   - (i) *How did Nigeria receive its name?*
   - (ii) *Why was Ghana called Gold Coast?*
   - (iii) *In what latitudes is Nigeria situated?*
2. Make out correct pairs from the two columns:
   - (a) *A river of Ghana*
   - (b) *The capital city of Ghana*
   - (c) *The capital city of Nigeria*
   - (d) *Important minerals of Ghana*
   - (e) *Important minerals of Nigeria*
   - (f) *A leading export of Ghana*
   - (g) *A leading export of Nigeria*
   - (h) *A chief town of Northern Nigeria*

   - (i) *Palm-oil*
   - (ii) *Accra*
   - (iii) *Kano*
   - (iv) *Gold and bauxite*
   - (v) *Lagos*
   - (vi) *Volta*
   - (vii) *Takoradi*
   - (viii) *Columbite and tin*
   - (ix) *Cocoa*
3. Describe the favourable conditions required for a good cocoa crop. How is cocoa obtained from cacao trees?
4. What are the major crops of Nigeria? What climatic factors are responsible for their growth?

Picture Reading

5. See Pictures IX and XXI. What similarities and differences do you notice in the way the people dress themselves?

Map Work

6. Show in the outline maps of Ghana and Nigeria the crops and minerals of the two countries.

Topic for Class Discussion

7. '*Agriculture in Ghana and Nigeria*'

   Collect information on this topic and state the points of similarities and differences between the two.

9. The Gift of the Nile

The Terms You Already Know: *Gulf*—A small arm of the sea penetrating inland. *Peninsula*—A land surrounded by sea on three sides.

The United Arab Republic is an African country a small part of which extends into Asia. It is situated at the cross-roads of the Old World, comprising Asia, Europe and Africa. Since long, this Afro-Asian country has served as a land-bridge between Asia and Africa. Today, the Suez Canal serves as the most convenient gateway of international trade between the countries of the east and the west.

The United Arab Republic is a part of the great Sahara Desert which occupies nearly half the African continent in the north. This desert belt further extends into West Asia. But the life-giving waters of the Nile have made it one of the richest and thickly populated lands of Africa. No wonder then, that this country is called the "Gift of the Nile". The Nile Valley of the United Arab Republic has been the home of

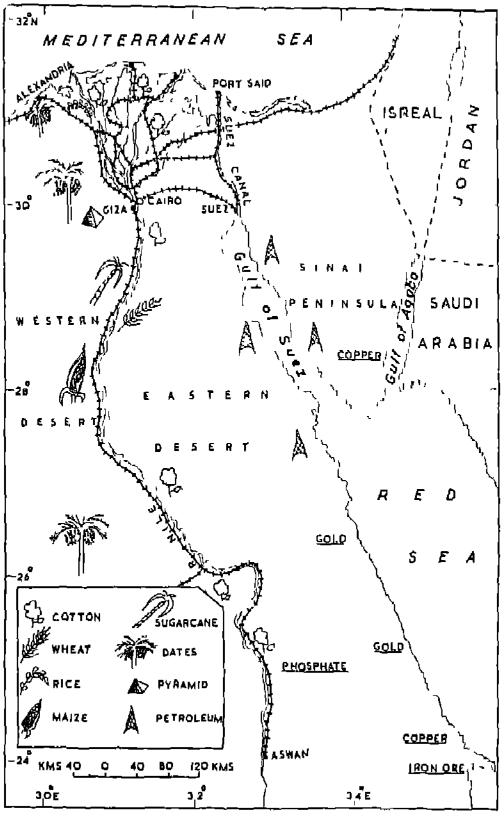


Fig 18. The Nile Valley

Note the location of the United Arab Republic in relation to the continents of Africa, Asia, and Europe. Why is it called the crossroads of the Old World?

one of the oldest civilizations of the world.

The United Arab Republic is a big country slightly less than one-third the size of India. Its population, however, is less than that of the state of our Tamil Nadu.

Look at the map and note the neighbouring countries of the United Arab Republic. Which are the two seas that border this country? Do you see the isthmus separating the two seas? See if you can locate the Gulf of Suez and the Gulf of Aqaba. Where is Sinai Peninsula? Why is it called a peninsula? It lies in Asia. To the east of this peninsula is situated Israel, a country of the Jews.

Look at the River Nile on the map. It enters Egypt from the south and drains into the Mediterranean Sea on the north. North of the city of Cairo the river splits into a number of channels, distributing its waters over a wide tract. Numerous channels through which the river joins the sea or a lake are called the *distributaries*.

Look at the distributaries of the Nile in your map. They form a triangle whose head or *apex* lies at Cairo. The ancient Greeks described this triangular part of land having numerous distributaries as the delta. This was because its shape looked like their fourth alphabet Δ (delta). This is how the word delta came to be used for any triangular tract of alluvium formed at the mouth of a river. A delta is made up of alluvium or fine silt brought down by a river. Fresh alluvium is constantly deposited at the mouth of a river. As a result, a delta extends gradually into the sea or a lake into which it drains.

Land and Climate

The land of the United Arab Republic may be divided into two physical divisions—the Nile Valley and the desert region. The largest part of the country is occupied by the great Sahara Desert. The Nile Valley occupies only a narrow strip of this sandy and rocky desert. It has a maximum width of about 16 kilometres. At places it is very narrow, not more than 200 metres.

The Nile is the world's longest river. Its source lies in the Lake Victoria in the equatorial region. The river, before entering into Egypt, collects ample water from a very large rainy area.

The United Arab Republic has a desert climate. The northerly wind coming from the Mediterranean Sea tempers its climate to some extent. The climate of southern

Egypt is rather extreme. Sandstorms are very common in April and May, owing to southerly winds. The whole region receives very scanty rainfall. The average rainfall at Cairo is hardly 2·5 centimetres a year.

Economic Development

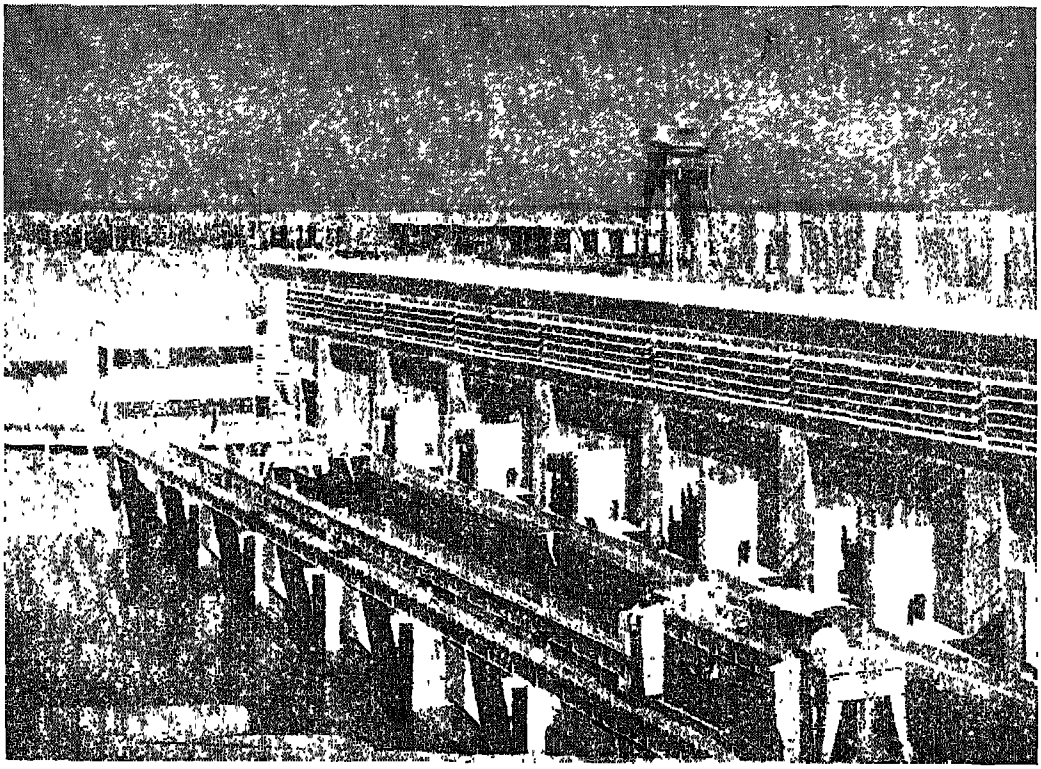
In Egypt hardly three per cent of the total land area is under cultivation. But nearly two-thirds of its population is engaged in agriculture. It speaks of the high fertility of the Nile Valley, the delta and a few oases in the west. There is great pressure of population on the agricultural land. The Egyptian farmer called *fellah* has to work very hard on his small farm. With the help of irrigation water he obtains five crops in two years. The important cereal crops are wheat, millets and maize. But their production is inadequate for its population. Date is an important product of Egypt grown especially in its oases. It exports dates on a large scale. Rice, sugarcane and cotton are the cash crops of Egypt. The country exports some rice, sugar and a good deal of cotton. Cotton is the most important crop of Egypt. It is well known for its fine quality.

A cotton plant needs fertile soil, high temperature and abundant sunshine. It grows well with irrigation water. It bears fruit or boll in about six months. On ripening it bursts open showing white fluffs. During the picking season cotton is to be carefully protected against rain, fog, dust and pests. This is why the hot, dry and clear weather in Egypt is highly suitable for cotton.

X. Harvesting Dates

Look at the Egyptian farmer who has climbed a date-palm to harvest the dates. Note the basket and the strong rope around his waist which keeps him secure on this high tree. Why are dates very important in this region?

Egyptian agriculture depends entirely on irrigation. The flood waters of the Nile have been used for irrigation with great skill for the last 5,000 years. Flood waters are diverted into large basins through the canals. *Basins* are large fields surrounded by dykes or embankments. At flood time the holes left open in the banks permit water from the canal to fill the basin. Flood waters are retained in these basins for a month or two. The soil is thus allowed to soak ample water so that it may need no more water for the crop once it is sown. It has another advantage. The fresh silt contained in the flood water is also allowed to settle in the basin itself, increasing its fertility. Water is then drained off, at will, through the holes into the canal and then to the next



XI The High Dam at Aswan

This high dam on the Nile, when completed, would be about 110 metres high and more than 3 kilometres long It will irrigate more than 800,000 hectares of land, raising the production of cotton, rice, sugar-cane and dates. With what Indian dam will you like to compare it?

basin. This system of irrigation is useful to irrigate only one crop after the floods every year.

In recent years Egypt has built several high dams on the Nile. The largest among them is at Aswan. Canals taken from these dams irrigate crops all through the year. More and more area is being brought under irrigation. Farmers are now able to raise more than one crop from their fields.

Oil is the most important mineral wealth of the United Arab Republic. It is found in Sinai and along the Red Sea coast. A few other minerals such as phosphates, sea salt, manganese and iron-ore are also mined.

The country is now developing its industries. Leading among them is the cotton textile industry. The other industrial products are cement, glass, iron and steel, fertilizers, paper, sugar and petroleum.

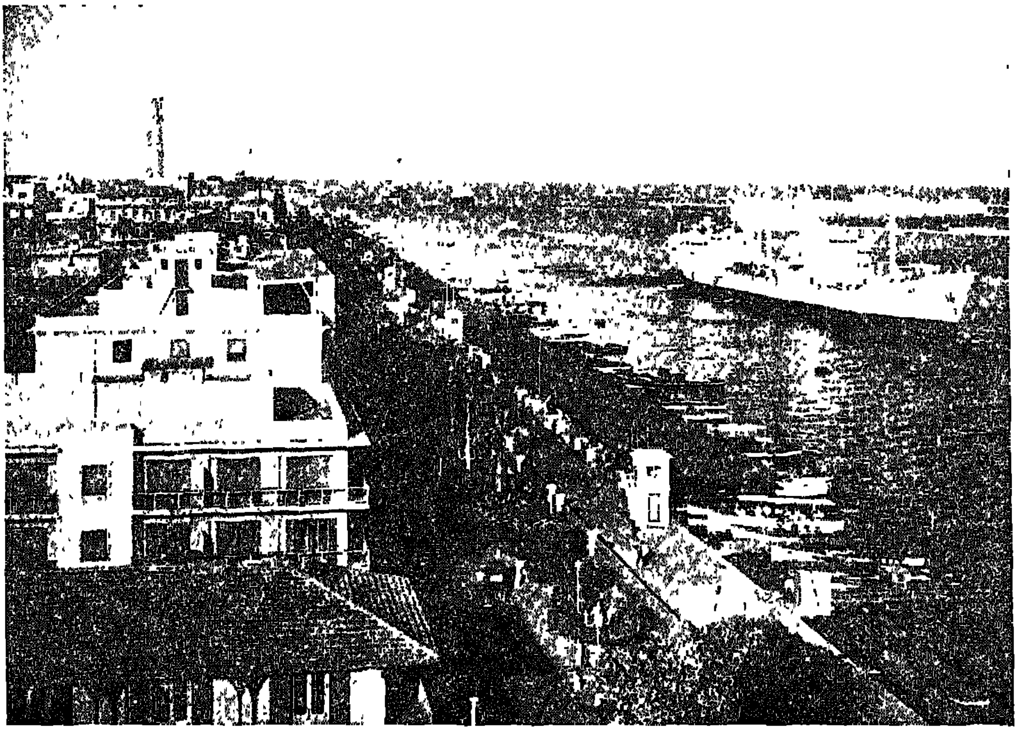
Population and Transport

The country has a population of about 30 million. It gives this country an average density of 30 persons per square kilometre. Actual distribution is, however, very uneven. In the Nile Valley it is as heavy as 400 persons per square kilometre. In the delta region it is still higher. The people of this old country are the Arabs and are the followers of Islam. The original name of the country is Misr. The ancient monuments such as the Giza Pyramids and the Sphinx still speak about the glory of ancient Egypt and its prosperous civilization.

Cairo is the capital city of the United Arab Republic. With a population of over 3·5 million people, it is the largest city of the African continent. Alexandria is the second largest town and the largest port. Its population is over one million and a half. It was founded by the Greek Emperor, Alexander the Great.

The country has a network of roads and railways especially in the Nile Valley and the delta. Cairo is the natural centre of its transport system. It is also a very important international airport. But it is the Suez Canal that puts Egypt on the world map of international trade. In the desert region the camel is still indispensable for transport. It is rightly called the "ship of the desert".

The isthmus separating the Mediterranean Sea from the Red Sea has been one of the most important crossing places of the world. For centuries goods were transshipped from one sea to another over this land. This caused great hardships although they were worth the trouble. The other alternative was to go all the way round the Cape of Good Hope. With the construction of the Suez Canal in 1869, it became possible for a ship to sail from one sea into another.



XII. The Suez Canal

Look at the big ships passing through this all sea-level canal. Why is this canal very important for the United Arab Republic?

The Suez Canal is 162 kilometres long. The canal handles about 45 ships a day. A vessel takes about 10 to 12 hours to pass through the canal. Nearly one-seventh of the world's international trade passes through the canal. The canal has shortened the voyage from Bombay to London by over 7,000 kilometres, saving lot of time and money. The canal is owned and managed by the United Arab Republic. It is a great source of income for it. The Suez is the port situated on the Red Sea and is the southern gate of the canal. Port Said stands on the Mediterranean and is its northern entrance.

The New Terms You Have Learnt: *Distributaries*—The channels of the river through which it drains into the sea or a lake. *Delta*—A more or less triangular tract made up of alluvium at the mouth of a river It is transversed by numerous distributaries *Basin irrigation*—A method of irrigating fields, bounded by embankments, by the flood waters of a river.

Exercises

Review Questions

1. Answer the following questions in brief:
    - (i) *What makes Cairo an important centre of transport?*
    - (ii) *In what sense is the United Arab Republic situated at the cross-roads of the world?*
    - (iii) *What are the old names of the United Arab Republic?*
2. Distinguish between:
    - (i) *a tributary and a distributary.*
    - (ii) *a strait and an isthmus.*
3. What are the conditions favourable for the growth of cotton in the United Arab Republic?
4. Why is Egypt called the 'Gift of the Nile'?
5. Explain what is basin irrigation. How does it differ from canal irrigation?
6. Complete the following statement by choosing a correct ending: The Suez Canal is the busiest international water-way because
    - (a) *it charges nominal toll on the goods passing through it.*
    - (b) *it avoids going round the Cape of Good Hope.*
    - (c) *it is an all sea-level canal.*
    - (d) *it is the longest sea canal.*

Picture Reading

7. See Pictures X and XIX. They show the two varieties of palm. Note how they are different from one another. In what way is each one of them useful to man?

Map Work

8. Show in an outline map of the world the Suez Route and the Cape Route. Write the distances between London and Bombay along both the routes.

Topic for Class Discussion

9. *'The Suez versus the Cape Route'*

Find out information on this topic and tell the class why this canal is very important for India.

10. A Land of Gold and Diamonds

The Terms You Already Know: *Cape*—A prominent headland projecting into the sea *Ocean Current*—Streams of water flowing on the surface of the sea. They may be warm currents or cold currents, depending upon the temperature of their water.

The Republic of South Africa occupies the southernmost part of the African continent. As it lies south of the equator it belongs to the Southern Hemisphere. The country is a high plateau of very old rocks. It is famous for its mineral wealth, especially gold and diamonds. It is also known for its animal products. In South Africa a small minority of the local White settlers rules over the entire country.

South Africa is a big country, nearly three-eighths the size of India. Its population, however, is very small—about the same as that of Kerala. With very large natural resources and a low population, it is the most prosperous country of the African continent.

Look at the map of South Africa. It is a country bounded by two oceans—the Atlantic and the Indian Ocean. It, therefore, occupies an important position on the international trade-route. Name the countries which have a common border with the Republic of South Africa. None of them except Lesotho and Botswana is yet free from their European masters or White settlers. Note that Lesotho surrounded by South Africa on all sides is not a part of South African Republic.

Land and Climate

The Plateau of South Africa is like an inverted saucer tilted towards the west. It is called the Veld Plateau and is covered with grass. The name Veld has been derived from the Dutch word *Veldt*, meaning field. The Drakensberg Mountains, in the east, mark the high edge of the plateau. It is drained by the

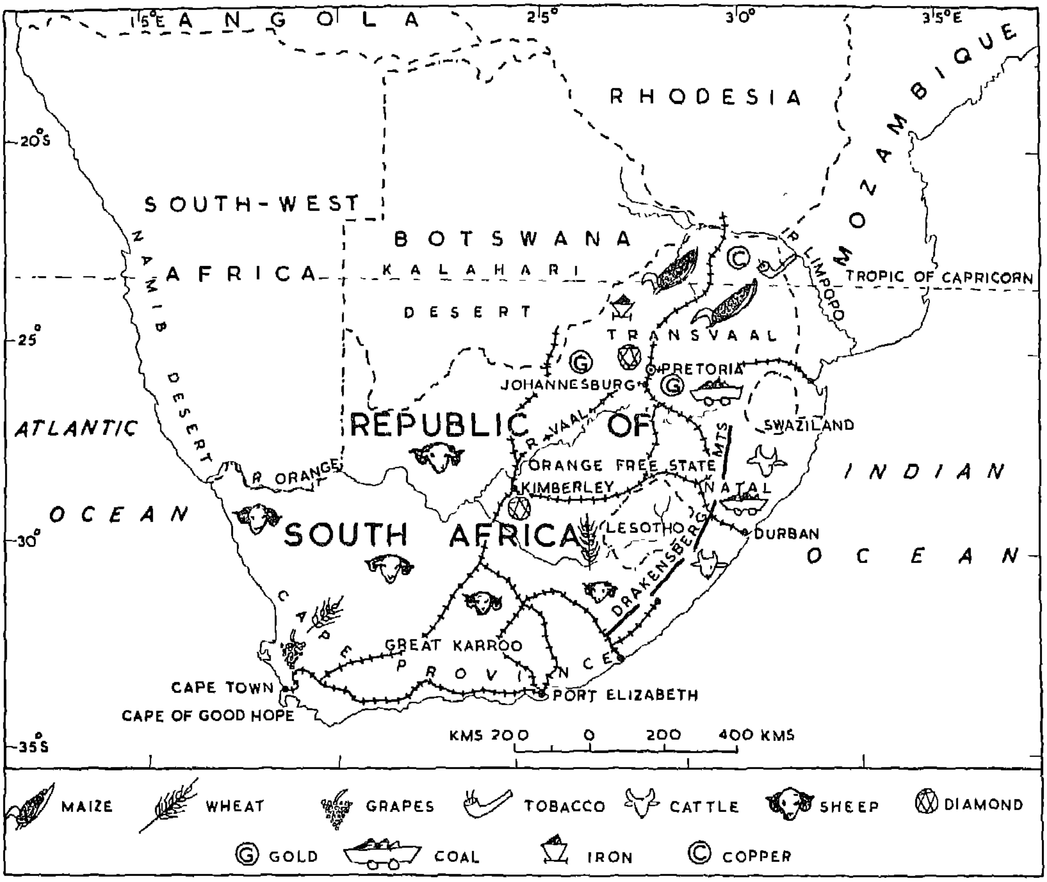


Fig. 19 South Africa

Note the Orange and Limpopo rivers. In what directions do they flow? What do they indicate? Where is Cape of Good Hope? What does its name suggest?

River Orange which empties itself into the Atlantic Ocean. To the east of the Drakensberg Mountains the land drops down rapidly. Towards the south the land drops down in steps.

South Africa lies in the warm temperate zone. For its location it enjoys a moderate climate as it is surrounded by seas. The great height of its plateau also makes its climate cool and pleasant. The cold current along the west coast further adds to its coolness. On the east, the warm current is responsible for a warm and rainy climate. Over most parts it rains in summer. The rainfall goes on decreasing from east to west and from south to north as one moves into the interior. Over the plateau it becomes almost scanty. The southernmost part of the country comes under the influence of the west winds in winter. It thus has a Mediterranean type of climate. Can you name the months in which it rains there?

Economic Development

A small part of South Africa receives plentiful rains. But it is generally hilly and difficult to cultivate. On the other hand, the major part of the country suffers for want of adequate rains. As a result, only one-eighth of the land is under cultivation. There are little irrigation facilities. Fertile well-watered lands are tilled by the white people. The non-whites work in mines and factories. Their farms are generally worked by women.

South Africa is self-sufficient in food production except in tea, coffee and cocoa. Corn is the staple food crop of the country. Also important is kaffir, a local variety of millets. Wheat, barley, rye and oats are grown on a small scale in winter. The grain farming is more important on the plateau region.

The white people grow various cash crops such as sugar-cane, fruits, potatoes, cotton and tobacco.

Sugar-cane is the important crop of Natal. The country exports considerable sugar every year. Natal is also known for its bananas and pineapples. The Western Cape province is known for its grapes, apples and peaches besides citrus fruits.

In this land, animal rearing is more important than the cultivation of crops. Breeding and rearing of animals on pastures is known as *pastoral farming*. The animals are reared for their milk, meat, wool and skin. South Africa has a large number of merino sheep known for their fine wool. It is the second largest exporter of wool, next only to Australia. Cattle and goats are also reared in South Africa. Some of the well-watered farms of the white people combine cultivation of crops with rearing of animals for their milk and meat. This type of agriculture is called *mixed farming*.

Mining is now a more important activity than various types of farming. South Africa is a leading producer of gold and diamonds. Both of them are highly precious commodities. Gold mines are located around Johannesburg. The country accounts for nearly half the world's annual supply of gold. About half a million people are engaged in gold mining.

A large number of people are engaged in blasting rocks containing very small particles of gold. Others are busy in bringing them to the surface with the help of big machines. The rock is crushed, washed and sorted before it is taken to a mill. There it is ground into a fine powder. It is then treated with a chemical which dissolves the tiny gold-containing particles, so that gold can be separated from the ore.

South Africa is famous for its diamonds. Kimberley is the well-known centre of the diamond mines. The country is also rich in platinum, manganese and uranium. It also mines iron-ore, copper, asbestos, nickel and coal.

South Africa makes several products from its agricultural raw materials. Tinned fruits, processed food, sugar, cigarettes and textiles are its important exports. It also exports processed meat, dairy products and leather goods. During the last few years it has developed its metal works and a chemical industry. These industries are based on its mineral wealth. Recently it has taken to heavy industries especially the iron and steel. It produces machinery, transport equipment and fertilizers. Now it is the leading industrial country in the African continent.

People

The total population of South Africa is only 18 million. This gives it an average density of only 14 persons per square kilometre.

Nearly two-thirds of the population consists of the native African people. They are the Xhosas, the Zulus and a number of tribes of the Bantus. Then come the white people who are less than a fifth of the total population. They are the descendents of the Dutch, French, German and British settlers. Nearly half a million people from India and Pakistan live in South Africa. They were taken there mainly to work on sugar-cane plantations. They do not enjoy full rights.

Today the government of South Africa is run entirely by the white people. The other people have no part in the government of the country. Under the new laws, the white people and the non-white people are not allowed to mix. The non-whites are required to live on their reserves or in separate townships. Thus there is complete segregation of the non-white people. They have to put up with several handicaps although they form a majority in the country. The policy of segregating the people on the basis of their race or colour is known as *apartheid*. The non-whites are struggling for their rights so far denied to them.

Johannesburg is the largest city of South Africa. It is a commercial and industrial centre with a population of over one million people. Pretoria is the seat of the government of the country. Cape Town is the largest port of the country and is the seat of the country's legislature. Durban and Port Elizabeth are the two other ports of South Africa. The country possesses a good network of railways. This has enabled it to exploit its mineral wealth, develop agriculture and expand its industries.

The New Terms You Have Learnt: *Pastoral farming*—Practice of breeding and rearing herbivorous animals for their milk, meat, wool or skin *Mixed farming*—Combination of cultivation of crops and rearing of animals for their milk and meat on the same farm *Apartheid*—Policy of segregating people on the basis of their race or colour of the skin.

Exercises

Review Questions

1. Answer the following questions in brief:
    (i) *How did the Cape of Good Hope receive its name?*
    (ii) *What is the meaning of the word Veld?*
    (iii) *Name the kind of climate found in the Cape Province.*

2. Make out correct pairs from the two columns:

(a) *A local millet in South Africa*	(i) *Johannesburg*
(b) *A centre of diamond industry*	(ii) *Cape of Good Hope*
(c) *A centre of gold-mining*	(iii) *Pretoria*
(d) *The administrative capital of South Africa*	(iv) *Kimberley*
(e) *The legislative capital of South Africa*	(v) *Cape Town*
(f) *The southernmost tip of Africa*	(vi) *Kaffir*

3. What is meant by pastoral farming? Why is it important in South Africa?

4. Describe the mineral wealth of South Africa? How is gold mined and refined?

Map Work

5. In an outline map of the world show the position of South Africa and the Cape of Good Hope sea-route.

Topic for Class Discussion

6. '*The Cape Route*'

Find out information regarding the discovery of an all-sea-route to India by Vasco-da-Gama. How did this discovery affect India?

UNIT FOUR

Asia: The Largest Continent

Asia possesses one-third of the land area of the world. It is indeed the world's largest continent. Moreover, it contains half the population of the world.

In Mount Everest it possesses the highest peak of the world. Its mountain chains are the highest in the world. It has broad plateaus, plains and river valleys.

In Asia there are lands that are very cold. It also possess lands that are very hot. If it contains deserts with hardly any rains, it also has the rainiest lands. Thus it is a continent of contrasts.

The large population of Asia is crowded in a few river valleys. These valleys are among the world's most fertile agricultural lands. Nearly three-fourths of the population of Asia still depends upon agriculture. Asia leads the world in the production of various crops such as rice, millets, jute, raw silk, rubber, tea, sugar-cane, spices, oilseeds and coconuts.

Asia possesses large deposits of tin, mica, mineral oil, coal, iron-ore, bauxite and manganese. It is a leading manufacturer of cotton, jute and silk textiles.

Asia is a continent with a very old history. It has many of the world's oldest civilizations. All the leading religions of the world originated in Asia. It has therefore been a pioneer in the field of culture and religion.

11. Land and Climate

The Terms You Already Know: *Tundra*—The region within the Arctic Circle where the natural vegetation consists of mosses, lichen and stunted trees *Coniferous trees*—Trees bearing cones and needle-like leaves. *Tiaga*—The swampy coniferous forestland of Siberia. *Steppe*—The treeless, short grasslands found mainly in semi-arid areas.

Look at the globe. You will notice that almost the whole of Asia lies in the Northern Hemisphere. It extends between 10°S and 80°N latitude. This is the widest north-south extent for any continent. Note its longitude. You will find that it stretches slightly less than half-way round the world in the east-west direction. If it is 12 O'clock at noon at the western border of Turkey, it would be 11 O'clock at night at the eastern-most point of Asia in East Siberia. Asia is nearly 14 times the size of India.

Physical Features

Look at the map of Asia (Fig. 20). We can divide Asia into five major physical divisions. They are (i) the Northern Lowlands; (ii) the Central Mountain Belt; (iii) the Southern Plateaus; (iv) the Great River Valleys; and (v) Island Groups of South-east and East Asia.

The Northern Lowlands: The northern part of the continent is a vast lowland called the Siberian Plain. It is more or less triangular in shape. Locate the rivers Ob, Yenisey and Lena on the map. These rivers flow from south to north and drain into the Arctic Ocean. In what direction is the slope of this plain?

Because of the severe winter of the polar region the lower courses of these rivers are frozen for several months in a year. The waters coming from the upper courses of the rivers spread over the large part of this flat plain. It results in forming swamps and marshes.

The Central Mountain Belt: South of the northern lowlands is a great

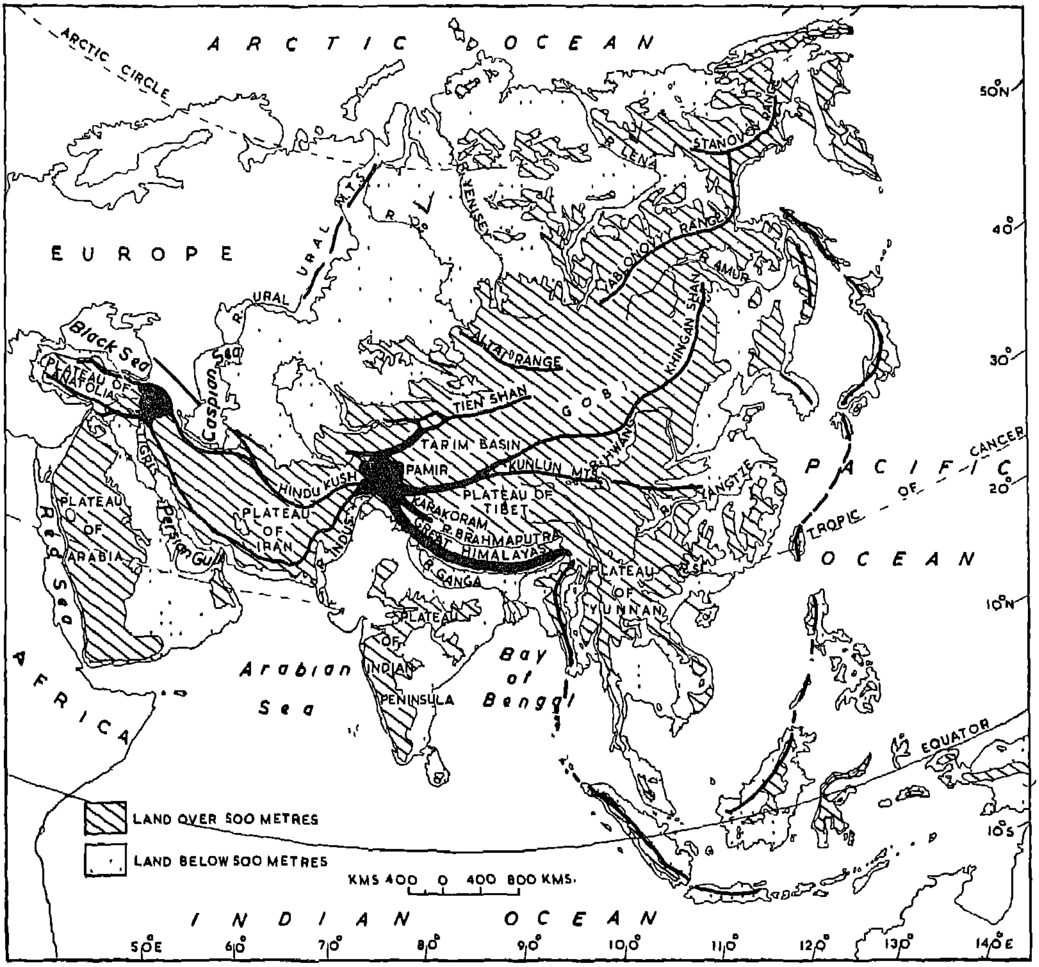


Fig 20 Physical Features of Asia

Note that Asia is a continent of mountains, plateaus and river valleys. Note the position of the Pamir Knot Which mountain ranges run in different directions from this Knot?

belt of mountains and plateaus. Look at the map and locate the Pamir Plateau, north of the Hindu Kush Mountains. The Pamir Plateau in Central Asia forms a central knot from which several mountain chains run in different directions.

Two important mountain chains run across Afghanistan, Iran and Turkey. The Plateaus of Anatolia and Iran are enclosed by these mountain chains.

A number of mountain chains run towards the east from the

Pamir Knot. Look at the map and locate the mountain chains of Karakoram, the Himalayas and the Kunlun. The Himalayas and the Kunlun Mountains form the two edges of the Plateau of Tibet. It is the widest and the highest plateau of the world.

Further north lies a low *desert basin.* It is enclosed by the Kunlun Mountains in the south and the Tien Shan in the north. To its north-east lies the great cool desert of the Gobi. This vast desert is situated on a plateau.

Look at the map and find out the important mountain chains of Asia along with their names. Do you notice a chain running towards the north-east in East Siberia?

The Southern Plateau: South of the central mountain belt are situated a few plateaus of very old rocks. These are the Plateau of Arabia, the Deccan Plateau of the Indian peninsula and the Plateau of Shan and Yunnan in South-East Asia. Many of these plateaus contain rich mineral deposits such as iron, manganese, tin, mica and gold.

The Great River Valleys: These are the lowlands made up of alluvium brought down by the great Asian rivers. These are among the most fertile parts of the world. Also they are the world's most thickly populated regions.

The Indo-Gangetic Plain of India and Pakistan is one such important river valley plain. The Plain of the Tigris and Euphrates in Iraq is another example of this kind. Look at the map and locate the river valleys of the Irrawaddy in Burma and the Mekong in South-East Asia. In China the important river valleys are those of the Hwang Ho, the Yangtze Kiang and the Si Kiang. It is these fertile river valleys of Asia that account for the huge population of the continent.

The Island Groups of South-east and East Asia: The important island groups consist of Indonesia, the Philippines and Japan. Most of these islands are mountainous. Some of them are known for their volcanoes.

Climate

Asia is a very huge land mass. It extends from the equator in the south to the polar region in the north. There are lofty mountains and high plateaus situated mostly far away from the sea. As a result there are great variations in the climate of Asia.

Conditions in Winter Season

Look at Figure 21. More than half of the continent north of the central mountainous belt has temperatures below freezing point. As a result of very low temperature the air over this region contracts. It becomes heavy, forming a high pressure area. From this high pressure region the winds begin to blow out. They are known as *land-bearing winds* as they originate over land. These winds are very cold and dry. The region, therefore, is almost free from winter rains.

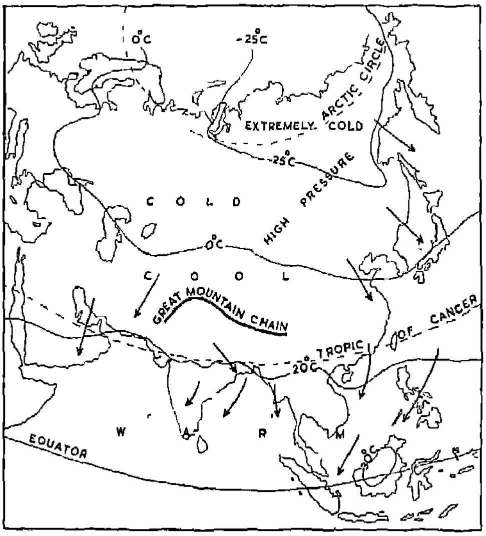


Fig. 21. Climatic Conditions in Winter (January)

Note that the northern and Central Asia have very low temperatures, high pressure and outblowing dry winds. Why does the climate of the most parts of southern Asia remain rather warm and dry in this season?

These winds become *moisture-laden* when they reach the land areas after blowing over the sea. Look at the map and see why Japan, parts of South-east Asia, the Philippines, Indonesia, the southern tip of the Indian Peninsula and Ceylon receive rain in this season. Turkey and parts of South-west Asia also receive some rain from the *on-shore* winds of the Mediterranean Sea.

Again, look at the map carefully and find out why the southern parts of Asia remain warm even in winter season.

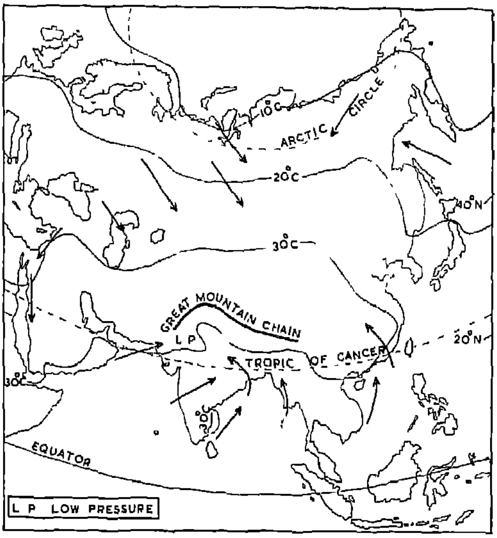


Fig. 22 Climatic Conditions in Summer (July)

Note that the temperatures over the most part of Asia are very high, except in the extreme north This results in wide low pressure areas, sucking in moisture-laden winds from all around Why do most parts of Asia receive plentiful rains in summer?

Conditions in Summer Season

Look at Figure 22. Very high temperatures in Asia occur over the plateaus of Arabia, Iran, Afghanistan, Pamir and Tibet. The temperatures are also high in the lower Indus Valley, in Rajasthan and parts of southern and central China. This hot belt of Asia is bounded by the parallels of 20° N and 40° N latitude. Occasionally the places in the Thar Desert and in Arabia experience temperatures as high as 50°C.

The high temperatures make the air very hot. Such air in turn expands and becomes light causing low pressure areas. Such low pressure areas are developed over parts of South-west and Central Asia. The lowest pressure in Asia is recorded over the Thar Desert in West Pakistan and North-west India. It becomes intense in the month of July. Rain laden on-shore winds are attracted towards the central parts of Asia during the summer months. As a result most parts of Asia receive plentiful rains in this season.

The actual distribution of rainfall depends upon location and relief of the land. There is a great variation in the amount of rainfall from place to place. Very often, the places in the desert regions receive no rain year after year. On the other hand, a place like Cherrapunji may receive more than 1,000 centimetres a year.

Climate and Vegetation

The climate and natural vegetation of a place are closely related to each other.

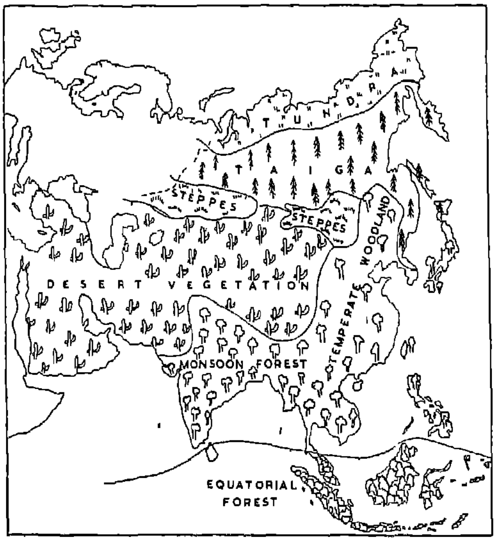


Fig 23 Natural Vegetation Zones of Asia

Note the broad natural vegetation belts from north to south What information can we infer about the climate of each of the vegetation belts?

Look at Figure 23. Along the northern coast of Asia lies a narrow belt of the *tundra* vegetation. The region is mostly covered with deep snow and ice for the major part of a year except the brief cool summers. It receives precipitation of about 30 centimetres, mostly in the form of snow. The region is known for its extremely cold winds. They make it almost impossible for a plant to attain any height. As a result the region is covered with moss and lichen. A few stunted trees, such as dwarf willow and birch begin to appear only towards the south. The reindeer is the most common animal of the tundra region.

XIII. The Tundra

A hunter is taking a polar fox out of a trap Note the soft and long fur of this animal Look at the clothes of the hunter. What are they made of?

To the south lies a much broader belt of coniferous forests known as the *taiga*. It experiences severe winters and brief warm summers. The region receives between 25 and 50 centimetres of precipitation, mostly in the form of snow. Even this low precipitation is sufficient for trees to grow as there is little evaporation. The fir, spruce and pine are the common trees found in this belt. This is the largest storehouse of softwood. It is used as timber and in making paper-pulp and rayon. The

XIV The Taiga

A hunter in the Taiga forest has killed this giant bear. It received three bullets before it gave in. How is the life of a hunter in the taiga different from that of a hunter in the Tundra?

taiga is the abode of fur-bearing animals like foxes, sables and mink.

Further south lies a narrow belt of a temperate grassland known as the *steppe.* The region experiences cold winters and fairly hot summers. It is a land of limited and uncertain rains, varying between 20 and 40 centimetres. The rains occur mostly in summer and evaporation is excessive. The moisture, therefore, is enough for grass but not for trees. The antelope is a common animal of these grasslands.

Very large parts of South-west and Central Asia are covered with desert vegetation. You already know what the desert type of climate is like. In this part of Asia generally conditions are unfavourable for plant growth. Only desert vegetation such as shrubs and poor grasses which live only for a few days grow in this part. In the south-west are the hot deserts of Arabia and the Thar. In the north lies the temperate desert of the Gobi. The camel, ass, gazelle and cheetah are the common animals. The plateau of Tibet is a cold desert. The yak is the common animal of this high plateau region.

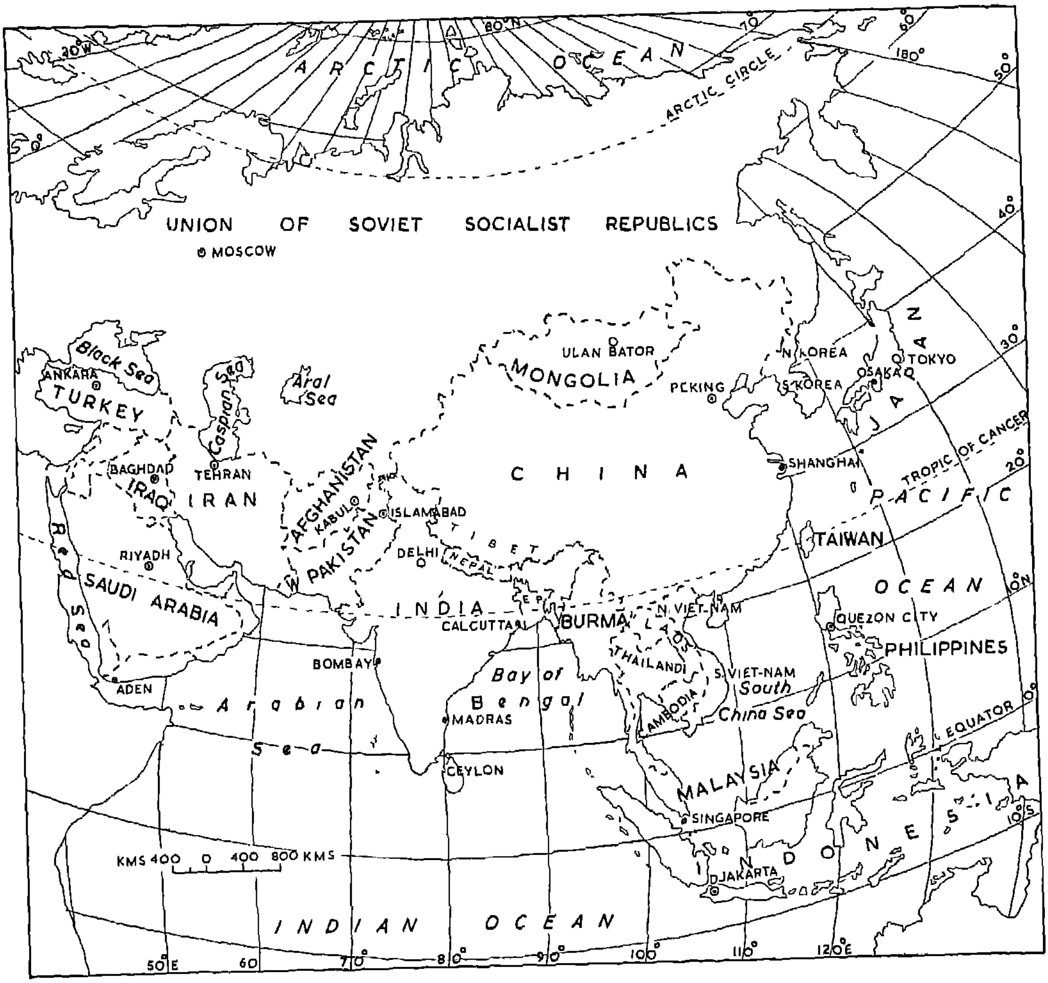
In the South, South-east and East Asia lies the region of monsoon forests. The parts of South and South-east Asia have high temperatures, plentiful rainfall and a long growing season. The rains are concentrated over a few summer months. The trees generally shed their leaves in the dry season. The forests consist of trees such as teak, sal, banyan, bamboo, sandalwood and eucalyptus. The elephant is a typical animal of thick monsoon jungles. In East Asia the vegetation consists of scattered trees and is generally described as a temperate woodland.

In the extreme south lies a region of equatorial forests. It is confined to the Malaysian peninsula and the island groups lying close to the equator. You know what the equatorial type of climate means. You have also read about the vegetation found in this region. Apes and monkeys are the common animals of this region.

Political Map of Asia

Asia is a large continent divided into numerous political units. It consists of some of the large countries of the world. At the same time it possesses several small countries too.

Look at Figure 24. Find out the three largest countries of Asia. Locate the capital cities of Japan, China and India. Which large country extends deep both into Asia



"The demarcation of the Gujarat West Pakistan Boundary in accordance with the Indo-Pakistan Western Boundary Case Tribunal Award is in progress (1969)".

Fig 24 Asia—Political Divisions

Asia consists of a third of the total land area of the world But it contains about half the human population Name the three largest countries of Asia.

and Europe? Note the three land-locked countries of Asia. The *land-locked* countries are those that do not possess any coastline. Look at the map and name all the countries that have a common frontier with India. Name three countries that consist of large groups of islands. Which Asian country is divided into two separate parts far apart from each other? Name a country in South-west Asia that owes its existence to the twin rivers flowing through it.

The New Terms You Have Learnt: *A Desert Basin*—A low-lying desert area enclosed by mountains on all sides. *The Land-bearing winds*—The winds which originate over land and are dry. *The Moisture-laden winds*—Winds that contain considerable moisture as a result of their blowing over the sea. *Land-locked countries*—Countries which do not possess direct access to the sea

Exercises

Review Questions

1. Answer the following questions in brief:
   - (i) *Which are the five physical divisions of Asia?*
   - (ii) *Which is the highest plateau in Asia?*
   - (iii) *In what season are the rains plentiful in Asia?*

2 Distinguish between:
   - (i) *On-shore winds and off-shore winds.*
   - (ii) *A hot desert and a cold desert.*

3. Divide Asia into five physical divisions and state how each division differs from the rest.

4. Name the six natural vegetation belts of Asia. Take any two belts and state how the vegetation in each belt depends upon its climate.

5. From the words given below prepare a table as indicated:
(i) moss; (ii) short grass; (iii) teak; (iv) reindeer; (v) lichen; (vi) mahogany; (vii) sal; (viii) thorny shrubs; (ix) elephants; (x) camel; (xi) fir; (xii) pine; (xiii) date-palms; (xiv) creepers; (xv) silver fox; (xvi) apes.

Vegetation belt	Common trees	Animals
Tundra		
Taiga		
Steppe		
Arid deserts		
Monsoon forests		
Equatorial forests		

Picture Reading

6. Look at the pictures of this chapter and study carefully the difference in the climate of the two regions. See if the landscape, vegetation, animals and the way people dress themselves can help you in this regard.

Map Work

7. Study the map of Asia from your atlas and find out the following:
   - (i) The mountains: *the Hindu Kush and the Karakoram.*
   - (ii) The rivers: *Tigris-Ephrates and the Mekong.*
   - (iii) The countries: *Turkey, Afghanistan and Thailand.*
   - (iv) The cities: *the capital cities of Iran and Iraq.*

Topic for Class Discussion

8. '*The Clothes and Houses in Different Parts of Asia*'

   Find out information and present it to the class. Collect pictures on this topic in support of your information.

12. Using Wealth Provided by Nature

The Terms You Already Know: *Growing Season*—A part of the year with temperatures high enough to allow the growth of crops. *Irrigation*—Supplying water to the land to promote the growth of crops.

Asia is a land of ancient civilizations. These civilizations have been prosperous at one time or the other. Even today Asia supports more than half the world's population. This is because it possesses very rich natural resources. These resources help its people to earn their living. Hard work and a still better use of these resources by the people can make them more prosperous. This is what the Asians are engaged in today, to make themselves more prosperous once again.

The largest asset of Asia is its agricultural resources. *Agricultural resources* cover fertile soils, ample water for irrigation and favourable climatic conditions for the growth of plants Asia is also rich in its forest wealth and mineral deposits.

Agricultural Resources

Very large parts of Asia are occupied by mountains, plateaus, deserts and forests. As a result, only one-sixth of the total area of Asia is suitable for agriculture. Even then Asia is rich in its agricultural resources mainly because of its fertile river valleys.

Look at the figure and note the important river valleys of Asia. Many of these valleys have been the cradles of old civilizations. Fertile soils, assured supply of water from these rivers and a long growing season were all responsible for the early beginning of rich agriculture in many of these valleys.

Rainfall in Asia is not evenly distributed all through the year. As a result irrigation in certain parts of Asia is very common.

In certain parts flood waters of the rivers are diverted into the fields for irrigating crops. This is one of the oldest methods of irrigation. In course of time, large dams were built across the river beds to store water. Water from the river dams can be used even in dry seasons when it is in great demand for the crops.

In large parts of Asia tanks are built to store rain water. Irrigation based on this method is known as *tank irrigation.* Yet another widespread method of irrigation depends on wells.

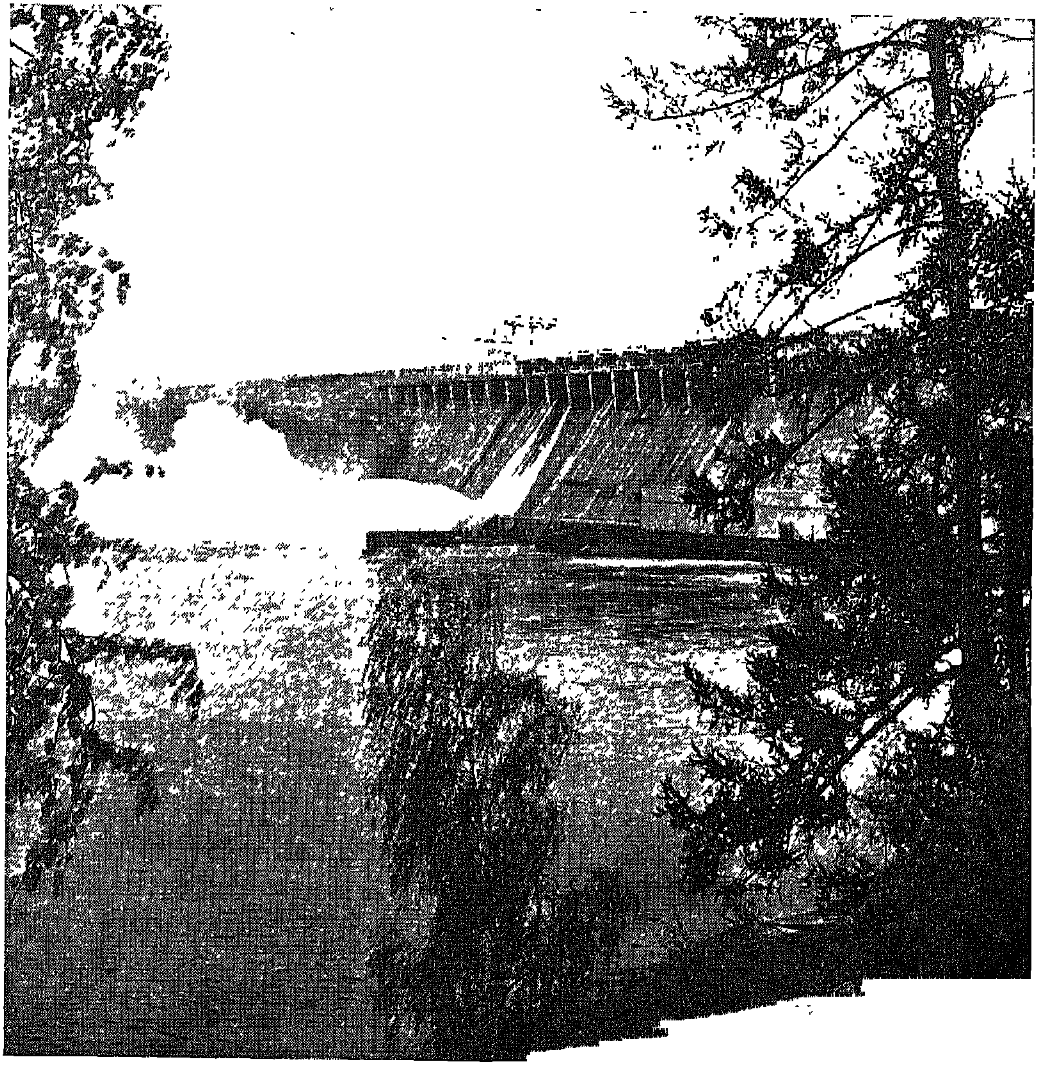
In China, irrigation is widely practised in the valleys of Hwang Ho, and in the delta of the Yangtze In Central Asia, it is practised in the valleys of the Syr Darya and Amu Darya and in Ferghana. In recent years large modern dams have been constructed in this area. West Pakistan and India are the countries where agriculture largely depends upon irrigation.

Very large river valley projects serving several objectives at a time have been taken up in recent years. They are commonly known as *multipurpose projects.* For example, Bhakra-Nangal is one of the biggest multipurpose projects of Asia. Besides irrigation, such big river valley projects help in conserving soil and water. They also help in controlling floods and provide water for developing hydro-electricity, or water-power. Iraq is yet another country where irrigation is very important. This country is often called the gift of the Tigris and Euphrates.

Farming Practices

Several farming practices are common in Asia. Shifting agriculture is practised in small parts of Asia. Why do you think that it is not a good farming practice?

Asia on the whole is known for its intensive agriculture. A farmer generally possesses a small farm. He tills and levels the land before the onset of the rains. As soon as the rains start he begins the sowing operations. In some cases he sows the seed on a small plot. He then takes out the tender plants out of this nursery and plants them in the field very carefully. This is known as *transplantation.* He repeatedly weeds out his fields, applies some kind of a fertilizer and irrigates his field when necessary. He has to employ ample labour at the time of sowing and harvesting. If he possesses enough irrigation facilities he grows two or even three crops a year. Generally he plans the successive crops in such a way that the fertility of soil is maintained as far as possible. This is known as *rotation of crops.* Thus the farming practice which involves a lot of hand work and labour over a small piece of land is known as *intensive agriculture.*



XV The Biggest Water-power Station

Look at the world's biggest water-power station built on the river Angara in Siberia. Note the dam and the vegetation in this picture.

The returns from the farm in Asia are generally very low. The farms are very small. The farmers are poor and largely uneducated. They work with simple and old type of tools. They do not have enough irrigation facilities, fertilizers or good seeds. Farmers themselves generally consume all that they produce on the farm.

In some parts especially in Central Asia and West Siberia there are very large farms. Each farm may be a few hundred hectares. On such a huge farm it is not possible to work with manual labour alone. Most of the farming operations are carried out with the help of machines. Very few hands are required to look after vast farms. But it requires huge amounts of money for the machines. This method of mechanized farming is generally known as *extensive farming*. Crops like wheat and cotton are grown on these big mechanized farms.

Variety of Crops

Asia with its varied climates and irrigation facilities is able to grow a number of crops. With a very large population to be fed, Asia has to concentrate on the production of food crops. Even among the food crops its emphasis lies on cereals. Rice is the staple food crop of Asia. It is a crop of hot and rainy lands and can also be grown on irrigation water. It is grown in China, Japan, India, East Pakistan and in countries of South-east Asia, such as Burma, Indonesia, Thailand and Vietnam. More than 90 per cent of the world's rice is grown in Asia.

Wheat is another important cereal. It is a crop of temperate lands with cool summers. It is grown in the Soviet Union, China, northern India, West Pakistan and in countries of South-west Asia. Millets such as jowar (sorghum), bajra and ragi are grown mainly in semi-arid lands. Besides these cereals, food crops also include pulses and oilseeds. All these crops are generally produced by the farmer for his own consumption.

The important cash crops of Asia are cotton, jute, sugar-cane and tea. Cotton is grown in the Soviet Union, China, India, Pakistan, and in parts of South-west Asia. Jute, however, is the monopoly of the Ganga-Brahmaputra delta in India and East Pakistan. Sugar-cane is grown in India, Indonesia and Pakistan. Tea is grown in India, Ceylon, China, Japan and Indonesia. Among them India and Ceylon are the world's major exporters. Spices like pepper are grown mainly in India, Ceylon and Indonesia.

Forest Wealth

Asia has three main types of forests. They are coniferous forests, the monsoon forests and the equatorial forests. The coniferous forests of the Taiga region are the largest storehouse of softwood in the world.

They are used as timber and for making paper-pulp and rayon. Besides the Soviet Union, these forests are also found in Japan and in the Himalayan mountain region of India.

The important monsoon forests are found in India, Burma and parts of South-east Asia. The most important commercial species of these forests are teak and sal. The wood of these trees is used as timber. Bamboo is yet another useful tree

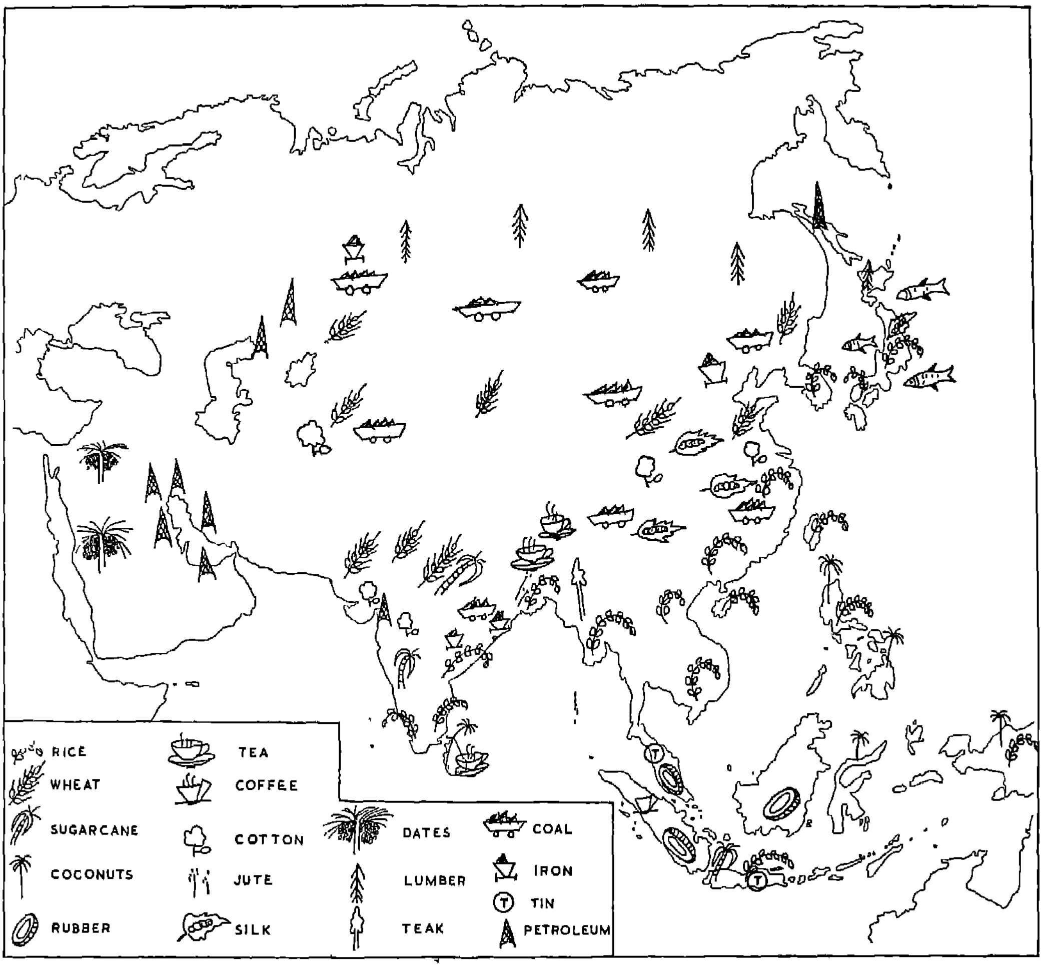


Fig. 25. Asia—Crops and Minerals

Note the areas producing rice and wheat. What do they suggest? In what areas would you expect iron and steel industry?

found in monsoon forests. You know that the equatorial forests have a few species of trees that are useful. In Malaysia and Indonesia parts of these forests have been cleared. They are now replaced by rubber estates. Malaysia is the largest producer and exporter of rubber in the world.

XVI. A Coal mine in Central Asia

Look at a coal mine in the Central Asian Region of the Soviet Union. The mine is worked entirely with the help of machines. Note that the coal is found very close to the surface.

Mineral Deposits

Asia possesses a large number of mineral deposits. Iron-ore, manganese, bauxite and tin are the important mineral ores of Asia. Metals derived from them are highly useful to us. Iron and steel are the most useful metals of our times. Without them we cannot have any machine. Tin is used for making tin-plates.

Look at the map and find out where each of these mineral ores are found. India is very rich in iron deposits. They are mostly located in South Bihar, Orissa and West Bengal. The Soviet Union also possesses iron-ore in a few areas. In China iron deposits are found in Manchuria. India possesses very large deposits of manganese. Bauxite is found mainly in India. Malaysia is very rich in tin. It is the largest producer and exporter of tin in the world. Mica is a special kind of mineral found in very thin sheets. It is used in making electrical goods. India is the largest producer and exporter of this useful mineral.

Oil and coal are the two other minerals found widely in Asia. They are known as *mineral fuels*, because they give us power or energy when burnt. Look at the map and locate their deposits. Oil is found in countries of South-west Asia. The leading producers are Kuwait, Behrain, Iraq, Iran and Saudi Arabia. They are all situated on the Persian Gulf. Some oil is found in the Soviet Union, Burma and Indonesia. In India, the States of Assam and Gujarat possess a few deposits. Recently oil has been found in parts of China. The largest coal deposits of Asia are located in China. The Soviet Union has large deposits in West Siberia and Central Asia. In India coal is found mainly in the Damodar Valley in Bihar and West Bengal.

The New Terms You Have Learnt: *Intensive Agriculture*—A farming practice involving lot of labour over a small piece of land. *Extensive Agriculture*—A farming practice in which a few farmers till large farms mainly with the help of machines

Exercises

Review Questions

1. Answer the following questions in brief:
   (i) *Which are the major cereal crops of Asia?*
   (ii) *What is rotation of crops?*
   (iii) *Name important minerals of Asia.*
   (iv) *Which are the five important cash crops of Asia?*

2. Distinguish between intensive and extensive agriculture.

3. Complete the following statement with the most suitable ending: A multi-purpose project means
   (a) *a big river dam built to irrigate a very large area.*
   (b) *a dam built especially for the development of electricity.*
   (c) *a group of dams on several rivers.*
   (d) *a river valley project realising several objectives at a time.*

4. Describe important agricultural practices in Asia. What are the main difficulties of Asian farmers?

Picture Reading

5. Pictures in Chapters No. 11 and 12 show different gifts provided by nature. What are they? Do you also notice the difference in the way man is able to utilize them?

Map Work

6. Show in an outline map the major crops of Asia.

Topic for Class Discussion

7. '*Farming Practices in India*'

Collect information and pictures on this topic. State how agriculture is being improved in your own neighbourhood.

13. People and Means of Transport

The Terms You Already Know: *Transport*—Carrying of persons and goods from one place to another *Port*—Commercial part of a harbour. It consists of loading, unloading and storing facilities for goods, and embarking and disembarking facilities for passengers.

Think of the icy-cold region of the tundra in the extreme north. You are at once reminded of the simple folk like the Samoyeds rearing the herds of reindeer. In the great Siberian plains we find the Russians engaged in developing the unused gifts of nature, such as forests and minerals.

Central Asia is known for its great horsemen and herders, the Mongols, the Kazakhs, the Uzbeks and the Kirghiz. The uplands of the South-west Asia are inhabited by the Turks, the Persians and the Afghans. They are all engaged mainly in agriculture and animal-rearing. The large arid tracts of South-west Asia are peopled by the Arabs. They have been making a living by farming and trade since early times.

The people of South Asia are known for their agricultural occupations and other arts and crafts. In South-east Asia we come across a variety of peoples, the Burmese, the Thais, the Annamese and the

XVII. A Kirghiz Horseman

Look at a Kirghiz farmer with golden eagle in his hand. The old farmer is a fine horseman. What kind of landscape do you see in this picture?

Malays. They are engaged mainly in rice cultivation. The islands of Indonesia and the Philippines are inhabited by the Indonesians and the Philipinos.

The Far East is the home of the Chinese, the Koreans and the Japanese. They are said to be the gardeners engaged in farming and rearing of silkworms. The Plateau of Tibet is occupied by the Tibetans engaged in herding sheep and yak for their fine wool.

Asians follow different faiths. It must be remembered that Asia is a continent where all the major religions of the world originated. Can you name them and the places of their origin?

Asia on the Move

The environment in which the peoples of Asia live vary greatly from place to place. Greatly varied are, therefore, the ways of their living Yet all of them are now busy in bringing about a change in their life. They are all on the move. Of course, some of them have gone much ahead, whereas others have started only recently.

The Asians are now engaged in constructing new roads and railways. Some of them are undertaking long journeys by air. New dams, big and small, are being built. Many farmers now use new tools and implements to till their lands. Some of them have taken to mechanized farming.

Many people are engaged in fishing, lumbering and mining. New mills and factories are being set up. They process articles derived from farms, forests and mines. Asia possesses numerous textile mills, sugar factories and iron and steel plants. In some parts machines and transport equipments are also produced. Many of the largest cities of the world are found in Asia.

Population Distribution

Asia accounts for nearly 1,800 million people. It means nearly half the people in the world live in Asia alone. The average density of its population is 41 persons per square kilometres. But in practice the actual distribution of population is very uneven.

Look at the map (Fig. 26) of Asia and locate the parts where the population is very sparse. You will notice that the population is very low in North and East Siberia. Also it is so in the deserts and highlands of Central Asia. Another area of very low population lies in South-west Asia. It consists of the Arabian

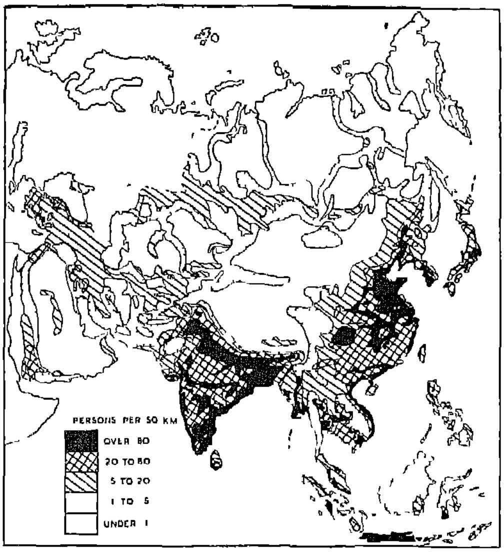


Fig 26 Density of Population in Asia
Note the most densely peopled parts of Asia. How will you explain very heavy concentration of population in these areas?

Desert and the Plateau of Iran. It further extends into the Thar Desert in India.

Locate the most thickly populated parts of Asia. They are mainly in South and East Asia. In what countries do you notice the highest density of population? The densely peopled parts of Asia are the plains of India, East Pakistan, the Java island in Indonesia, and the plains of China and Japan. Note that most of these areas are fertile lowlands or the river valleys. They are well-watered lands, receiving summer rains brought by the monsoons. Which of the two countries do not have large river valleys and yet they are densely populated? By and large the most densely peopled parts of Asia are fertile agricultural lands.

Transport

There are several modes of transport in Asia. Rivers are the only convenient and natural means of transport in the tundra and the taiga region. In summer small boats ply on them. But in winter when the rivers are frozen they provide excellent roads for the sleds drawn by the reindeer. In arid lands the camel is still indispensable. It is rightly called the 'ship of the desert'. In sandy deserts the donkey is a common and a respectable mode of transport. Horses and bullocks are very widely used in plains for carrying goods and passengers. In high hills the mountain-goats, mules and yaks are very useful because they are sure of their steps. In tropical and monsoon forests the elephant is a very useful animal, especially for carrying heavy logs.

Note that all these animals are well adapted to their natural environments. Moreover, they can be easily tamed. Hence such animals become the convenient means of transport in their respective regions.

With the passage of time, the transport in Asia has also undergone a rapid change. All the three kinds of modern modes of transport are now very common in Asia. They are land-transport, water-transport and air-transport.

Roads and Railways

The modern land-transport consists of roads and railways. The public roads joining distant places are known as *highways*. For example, the Bombay Agra Road is a national highway. The Grand Trunk Road connecting Calcutta and Peshawar is an example of an international highway.

Of all the Asian countries Japan possesses the best highways Some of them are so wide that half a dozen vehicles can run abreast. These roads are meant only for the fast running vehicles and are known as *superways*: Delay caused by crossings is carefully avoided on such roads. In India and China there are good networks of highways. In China the old 'Silk Road' and 'Tea Route' are being modernized. They connect China with the Soviet Union. Why do you think these roads were named after silk and tea? At present an international highway is being developed in Asia. It would pass through several countries connecting Istanbul in South-west Asia with Singapore in South-east Asia. What are the countries this road will have to pass through?

Look at Figure 27. Which is the longest railway line in Asia? In what parts do you see a good network of railways? India possesses a fairly thick network of railways. Japan too has an efficient railway network. Compare this map with the maps of relief and population of Asia. What will you conclude? It is easy and profitable to construct railways in the plains and in those parts where population is very heavy. Railways are constructed in hilly and thinly populated parts, if there are large mineral deposits and other resources.

Sea-Routes and Trade

Look at Figure 27. The continent is surrounded by sea on three sides. But the commercial sea-routes are confined to the south and east. Why is the Arctic Ocean not so important as a commercial sea-route? Note the important sea-routes from the Suez Canal in the South-west of Asia to Singapore in the south-east. Which are the important international seaports on this route? In the east this route swings northwards touching Hong Kong, Shanghai and Yokohama.

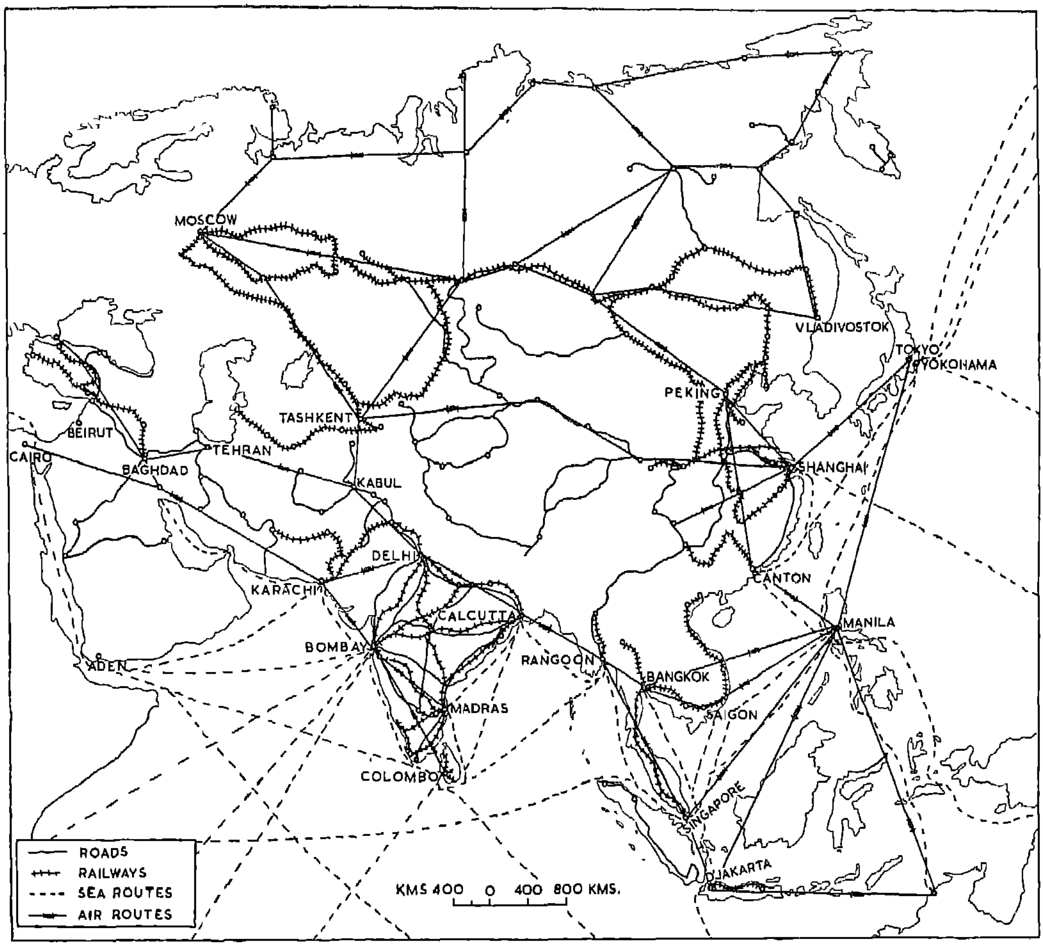


Fig 27. Important Railways, Sea-routes and Airways in Asia

Note that there is very uneven distribution of railways Why does Asia lack a well developed and integrated network of railways?

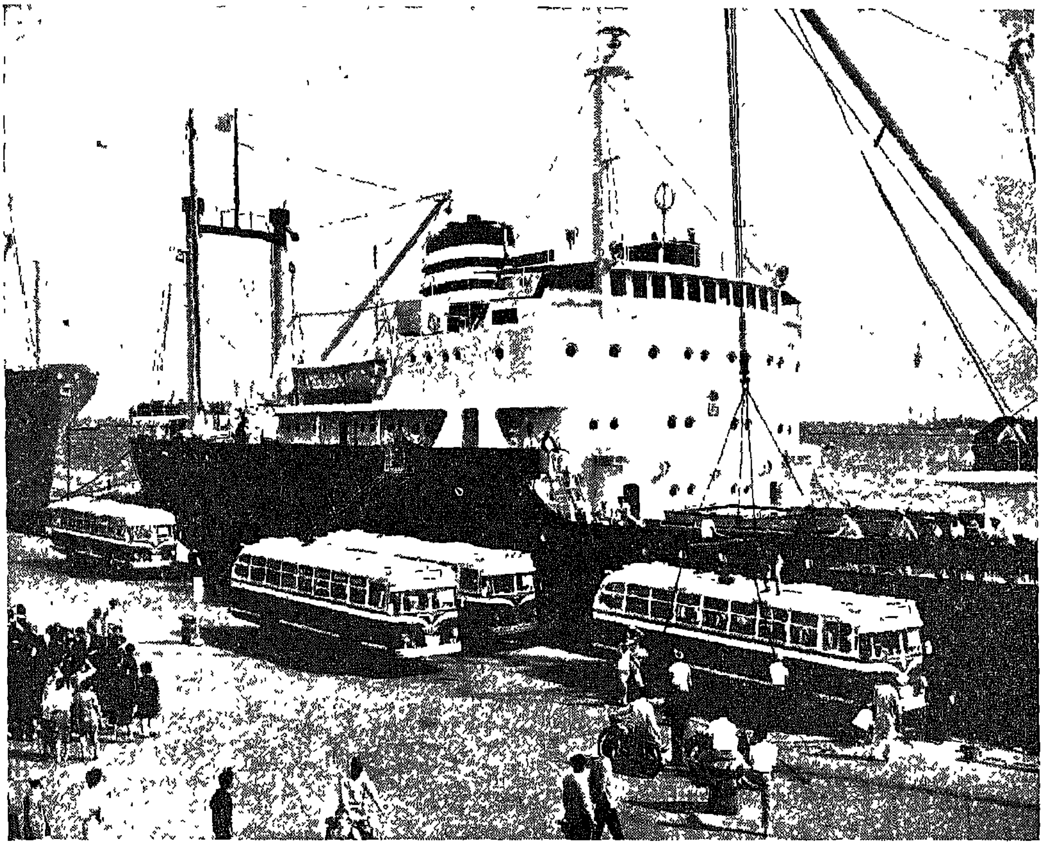
Bulk of the goods move from one country to another across the high seas. A large number of oil tankers leave the Persian Gulf for India and Europe.

Ships leaving Bombay carry cotton textiles, oilseeds and small engineering goods, mainly to South-west Asia and East Africa. Ships collect tea boxes from Calcutta and Colombo on their way to Europe. Jute textiles form an important item of export from Calcutta and Chittagong ports. Ships proceeding to Japan are loaded with iron-ore at Goa, Visakhapatnam and Pardeep.

At the Indian ports are unloaded wheat, rice, cotton, machines and engineering goods.

Teak and rice are the major exports of Burma. Singapore is the world's largest exporter of rubber and tin. Hong Kong is a busy international port south of China. A variety of goods unloaded at this port find their way into China. Ships leaving China carry cotton textiles, small machines and metal goods.

Ships on reaching the Japanese ports unload a variety of raw materials and food grains. On their return journey they carry a large variety of finished products. Vladivostok is the important sea-port of the Soviet Union. It exports fish, lumber and wood-pulp.



XVIII. The Japanese Port

Look at a Japanese Port where a big ship is being loaded with motor buses. Note the powerful cranes lifting these buses so easily. How are the people in this picture dressed?

Airways

Airways are steadily becoming important in different parts of Asia. Locate the important Asian airports on the map. Air travel is becoming more and more popular for long journey as it saves lot of time. Now it is the fastest means of public transport. But it is still very expensive. As a result very little goods are carried by air.

The New Terms You Have Learnt: *Highway*—A public road connecting distant places. *Superways*—Roads meant for fast-running vehicles. Delay caused by crossings is carefully avoided on such roads.

Exercises

Review Questions

1. Answer the following questions in brief:
    - (i) *Name three peoples each of Central and South-west Asia.*
    - (ii) *Which are the leading four religions of Asia?*
    - (iii) *What is an international highway?*
    - (iv) *Name four major seaports which are also international airports.*

2 Distinguish between:
    - (i) *a port and a harbour.*
    - (ii) *a highway and a superway.*

3. Which parts of Asia are very densely populated? Why?

Picture Reading

4. Study the picture of a port and write down what functions a port performs.

Map Work

5. In an outline map of Asia show the major sea-routes and paste on them pictures of goods moving along them.

Topic for Class Discussion

6 *'Trade and Transport'*

List various articles of daily use. Then think for a while wherefrom each one of the articles has come. Tell the class the probable journey it must have completed before reaching you.

UNIT FIVE

Asia: Some of its Lands and Peoples

Asia is a continent of several countries. Most of them are ancient lands. But a majority of them have become independent only recently. These countries are now trying hard to catch up with the advanced countries of the world.

Pakistan, our immediate neighbour, consists of two wings lying far apart from each other. Whereas West Pakistan is a water-thirsty land, East Pakistan is one of the well-watered lands of the world.

Nepal, Ceylon and Burma are also among the next-door neighbours of India. They are the lands of high hills, dense forests and monsoon rains. Nepal is a land of high mountains. Ceylon is known for its tea gardens. Burma, the land of pagodas, is famous for its teak. They are all connected with the Lord Buddha and his teachings.

Malaysia and Indonesia are two South-east Asian countries. Whereas Malaysia is known for its rubber and tin, Indonesia is a land of varied plantations. Singapore is called the 'Cross-roads of the East'.

China, a land of farmers of four thousand years, has the highest population in the world. Its total population is nearly a fifth of the world population.

Finally Japan, a land of the Rising Sun, is a country with an ancient civilization and a modern economy. This densely populated land of Asia is one of the most prosperous countries of the world.

14. A Land of Canals and Distributaries

The Terms You Already Know: *Pass*—A gap in a mountain range providing a natural route across.

Both the land and people of Pakistan till recently were a part and parcel of our country. It was born as an independent State on August 14, 1947, a day before India became free. The country belongs to the Indian subcontinent which is separated from the Asian mainland by a chain of mountains in the north As a result there are several things in common between India and Pakistan. The centres of ancient Indian civilization like Mohenjodaro, Harappa and Taxila are located in West Pakistan. In fact, the people of Pakistan are our kith and kin.

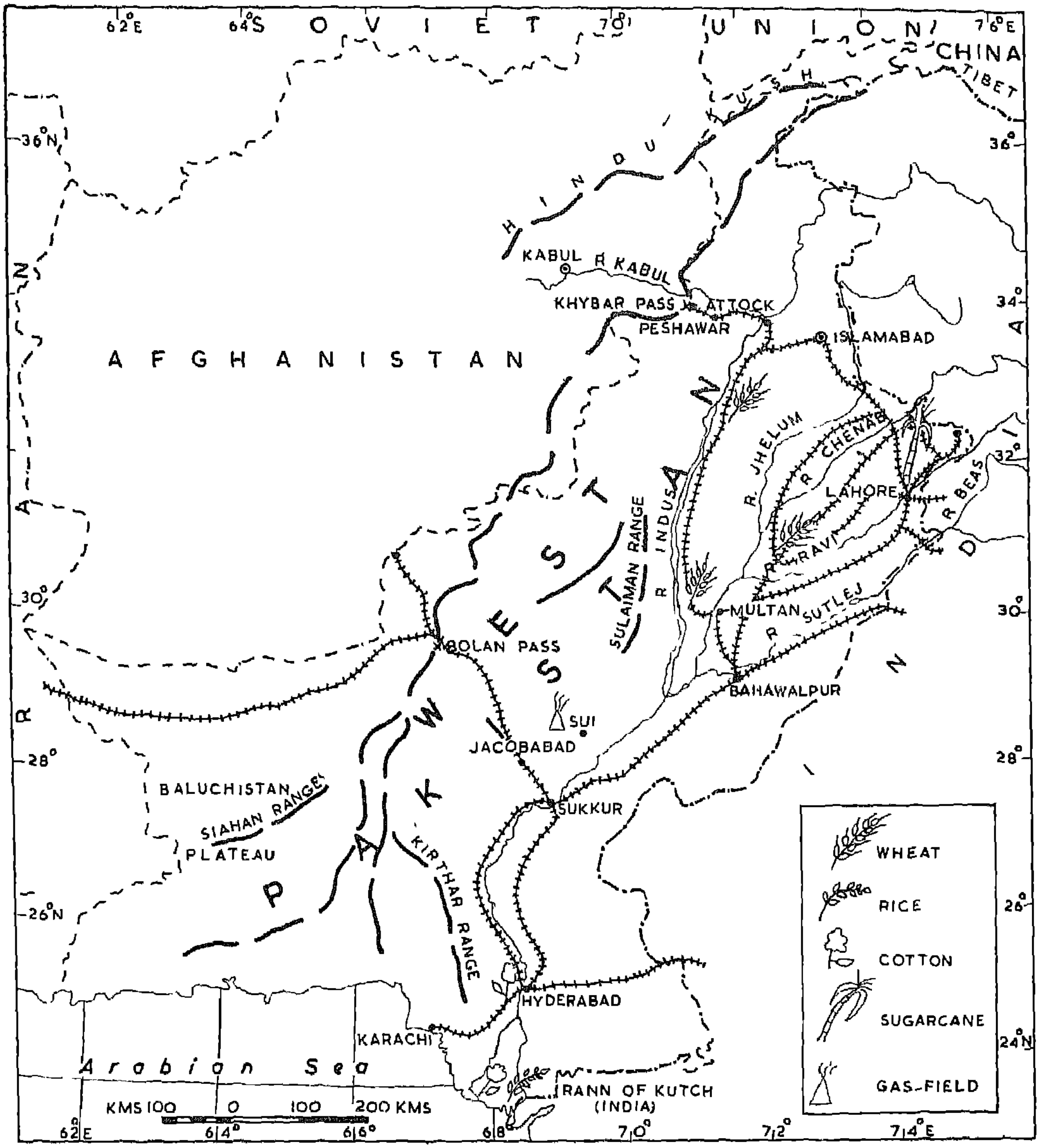
Pakistan is a little less than one-third the size of India. In population it is still smaller, only a fifth that of India. Pakistan is divided into two parts, separated not by sea but by land. It is thus a unique country of the world. The two wings of Pakistan are more than 1,700 kilometres apart. They are known as West Pakistan and East Pakistan. The two parts are remarkably different from each other in ways more than one. While West Pakistan is a land of canals, East Pakistan is a delta criss-crossed by numerous distributaries. One is a water-thirsty land, whereas the other is well-watered.

West Pakistan

West Pakistan accounts for nearly four-fifths of the total area of Pakistan. But its share in population is even less than half.

Land and Climate

Look at the map of West Pakistan. The country is bounded by Iran and Afghanistan on the west and north-west respectively. It has common frontiers with India on the east and



"The demarcation of the Gujarat West Pakistan Boundary in accordance with the Indo-Pakistan Western Boundary Case Tribunal Award is in progress (1969)"

Fig 28. West Pakistan

Note the neighbours of West Pakistan. Locate the chain of mountains which separates the Plateaus of Baluchistan and Afghanistan from the Plains of the Indus. What makes the Indus the most important river of West Pakistan?

south-east. The country stands on the Arabian Sea.

West Pakistan is a country of hills and plains. It is divided into two physical units. Its western part consists of the Baluchistan Plateau and the barren mountain ranges of the north-west The important mountain ranges of West Pakistan are the Kirthar, Sulaiman and Hindu Kush. These mountain ranges together with the Himalayas separate the Indian subcontinent from the rest of Asia. The famous Khyber Pass is situated west of Peshawar. It is the only natural gateway between the Afghan Plateau and Central Asia on one hand and the Indian subcontinent on the other. Through this Pass have entered the invaders and settlers into the Indian subcontinent. Another natural gate to the Plains of the Indian subcontinent has been the Bolan Pass. It provides an easy access to the plains of Indus from the Plateaus of Baluchistan and Iran.

The other physical unit consists of the plain of the Indus and its eastern tributaries. Much of it would be a desert but for the life-giving waters of the Indus and its tributaries.

On entering Pakistan the Indus begins to flow southwards. In its march towards the Arabian Sea it is joined by the combined waters of the Jhelum, Chenab, Ravi, Beas and Sutlej. The Kabul is the only important western tributary of the Indus. It joins the main river at Attock. The Indus in its lower reaches flows through the desert of Thar. The river joins the Arabian Sea through several mouths forming a fertile delta.

West Pakistan experiences extremes of climate. It is extremely hot in summer and very cold in winter. The highest temperatures of Asia are recorded at Jacobabad in Sind. The plains of the Indus receive an average rainfall of about 25 centimetres a year. This shows how dry or arid the region is The Baluchistan Plateau is still more arid as the monsoons do not reach this region.

Economic Development

Agriculture is the main occupation in West Pakistan, in spite of its arid climate. This has been made possible by the fine network of irrigation canals which it possesses. It is the world's largest single network. Nearly one-eighth of the total irrigated area in the world belongs to West Pakistan. The Indus and its tributaries have been harnessed for irrigating the arid but fertile plains of the Indus. Several large dams and barrages have been built on the Indus and its tributaries. The important among them are the Barrages at Sukkur and at Kotri.

India and Pakistan have agreed that the waters of the Indus, Jhelum and Chenab are to be used mainly by Pakistan. The waters of the remaining three rivers—the Sutlej, Beas and Ravi are to be used by India.

Wheat is the major food crop of West Pakistan. It is most widely grown in West Punjab. West Pakistan also grows millets like jowar and bajra in those areas where irrigation is not possible. Its important cash crop is cotton. It is of a fine quality as its fibres are long. Cotton with a long fibre is called *long staple* cotton. Cotton is mainly grown in the lower Indus Valley. West Pakistan also grows some sugar-cane and rice. Rearing of milch cattle is also important in West Pakistan.

West Pakistan possesses some deposits of mineral oil and natural gas. The gas-field at Sui is very important. It provides a natural fuel for the industrial towns of Karachi, Multan and Lahore. Rock salt is also found in this country. On the whole, Pakistan is generally poor in mineral resources.

West Pakistan has developed some new industries in recent years. It now produces a variety of goods. They include cotton and woollen textiles, sugar and cement.

Population and Transport

The people of West Pakistan are generally tall and fair. They consist of several groups such as Sindhi, Punjabi, Baluchi, Pathan and the like. Almost all of them follow Islam. Urdu is the common language spoken in West Pakistan. It is one of the official languages of the country.

West Pakistan has a total population of about 45 million people. It gives it an average density of about 52 persons per square kilometre.

Karachi is the largest city of Pakistan. It has a population of two million people. It is also the big industrial and commercial centre of Pakistan. It is a major seaport and an international airport. It is the nearest airport on the Indian subcontinent for the planes coming from Europe.

Lahore is yet another important city of West Pakistan. It has several new industries. Multan and Hyderabad (Sind) are the old trading centres of West Pakistan. Peshawar is an important city and a market place situated not far from the Khyber Pass. Islamabad near Rawalpindi is the new capital city of the whole of Pakistan. West Pakistan has a good network of railways especially in West Punjab.

East Pakistan

East Pakistan is a very productive part of Pakistan, and is most densely populated. It is a land of rice and jute.

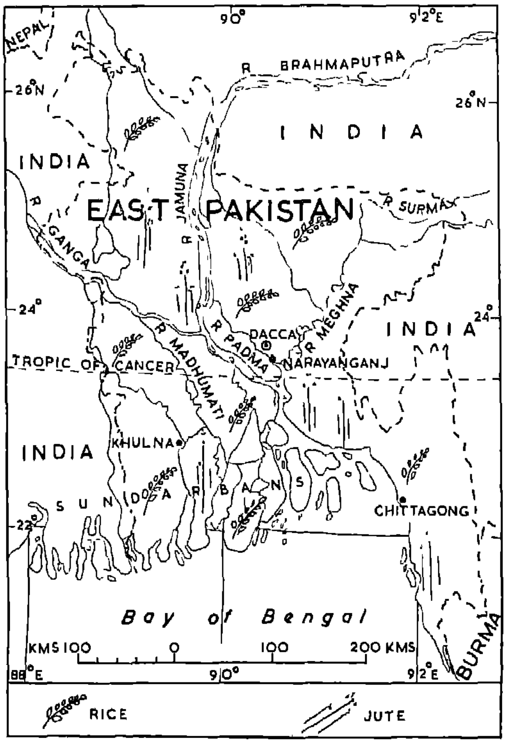


Fig. 29. East Pakistan

Note that the country is almost surrounded by India. It occupies the delta of the Ganga-Brahmaputra, the largest in the world. What is the name of the combined flow of the Ganga and the Brahmaputra?

Land and Climate

Look at the map of East Pakistan. Which states of India have common frontiers with East Pakistan? Note that Burma has also a common frontier with East Pakistan. This country is a maze of rivers and their distributaries. It occupies the major part of the world's largest delta, namely, that of the Ganga and Brahmaputra. It is also known for its fertility. East Pakistan is a fertile level land with only a few ranges of hills in the east.

The climate of East Pakistan is hot and humid. It receives a rainfall from 200 to 400 centimetres a year. It is thus a well-watered land of the Indian subcontinent.

Economic Development

Agriculture is the main occupation in East Pakistan. It produces rice and jute. Nearly three-fourths of its cultivated area is under rice and the remaining is devoted to jute. Rice is a staple food crop of its people. Jute, on the other hand, is the important cash crop of East Pakistan.

Jute plant grows well in rich alluvial soils, renewed every year by floods. It requires a hot, moist climate and a heavy rainfall. Seeds are sown in March or April, well before the rains start. The plants grow to a height of about three metres. They are ready for cutting in August or September. The stems of the plants are allowed to rot in water. It enables the separation of its fibres. This process of decaying stems and separation of fibres is known as *retting*. From jute fibres are made the gunny bags in which corn or grain is stored. Jute produced in East Pakistan is the best in the world. Its production is also the highest.

East Pakistan is an agricultural country with very few industries. It has now set up new jute mills for producing jute textiles. There are also a few paper mills.

Dacca is the major city of East Pakistan. It is its regional capital and a University centre. It was once famous for its fine muslin Now it has become a jute textile centre. Narayanganj is the port of Dacca and has the new jute mills of Pakistan. Chittagong is the major port of East Pakistan.

Population and Transport

Bengalis are the major inhabitants of East Pakistan. They speak Bengali, which is an official language, in addition to Urdu. Muslims are most numerous. But there are also a large number of Hindus and some Christians in East Pakistan. This part of Pakistan which is about one-fifth of its total area has a population of over 55 per cent. The density of East Pakistan is over 355 persons per square kilometre which is the highest in the entire Indian subcontinent. There are only a few cities and they are rather small.

East Pakistan has a small network of railways. But the river transport in this country is far more important. The Ganga, Brahmaputra, Padma and Meghna along with their distributaries are all navigable. They are the busy routes of trade and transport.

The New Terms You Have Learnt: *Indian subcontinent*—A part of Asia separated from it by the mountain ranges of the Sulaiman, Hindu Kush, Karakoram and the Himalayas. *Retting*—The process of decaying stems and separating their fibres.

Exercises

Review Questions

1. Answer the following questions in brief:
   - (i) *Why is the Indus called the life-giving river of West Pakistan?*
   - (ii) *Why has the Khyber Pass been very important in the history of the Indian subcontinent?*
   - (iii) *Write five ways in which East and West Pakistan differ from each other.*

2. Make out the correct pairs from the two columns:
   - (a) *A natural access between the Plateau of Afghanistan and the Indian subcontinent*
   - (b) *A natural access between the Plateau of Iran and the Indus Valley*
   - (c) *An important gas field of Pakistan*
   - (d) *The capital city of Pakistan*
   - (e) *The largest port of East Pakistan*

   - (i) *Chittagong*
   - (ii) *Karachi*
   - (iii) *Islamabad*
   - (iv) *Bolan*
   - (v) *Sui*
   - (vi) *Khyber*

3. What are the major crops of West Pakistan? Why do these crops depend upon irrigation?

4. What are the conditions favourable for production of jute? How far are they present in East Pakistan?

Map Work

5. In an outline map of East and West Pakistan, show the States bordering these countries. Name all the major rivers flowing into Pakistan from India. Indicate crops grown in East and West Pakistan.

Topic for Class Discussion

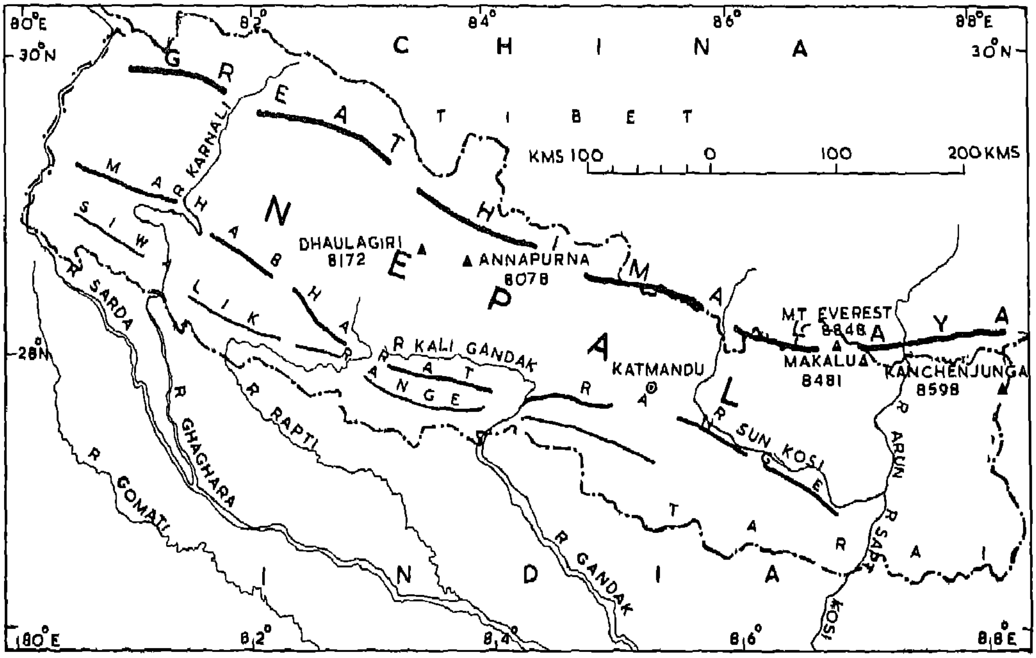
6. '*Trade between India and Pakistan*'

   Collect information on this topic. List all the important agricultural and industrial commodities and minerals in which the two can trade with each other.

15. Lands of Mountains, Tea Gardens and Teak

The Terms You Already Know: *Altitude*—Height of a place above sea-level *Small scale industries*—Industries in which not many labourers are employed in each unit.

Nepal, Ceylon and Burma are among the next-door neighbours of India. All of them have very close relations with our country. They vary widely from one another. Nepal is a land of high mountains. Ceylon is known for its tea gardens. Burma is famous for its teak and rice.



Based upon Survey of India map with the permission of the Surveyor General of India
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Fig. 30. Nepal

Note that Nepal is situated between India and China, the two big countries of Asia. Which rivers drain Nepal before entering into India?

All the same, there are several things in common to all the three.

Nepal

Nepal, a friendly country of ours, lies on our northern frontiers. Being situated on the lap of the Himalayas, it is often called a 'Himalayan Kingdom'. Mount Everest, the highest peak on the earth, lies in this Himalayan Kingdom. So is Kapilavastu, the birth place of Lord Buddha.

Look at the map and find out the length and width of Nepal with the help of the scale given in the map. This land-locked country is nearly half the size of Uttar Pradesh.

Land and Climate

Nepal is a mountainous country. The highest range of the Himalayas passes along its northern border. This range separates Nepal from Tibet, now a part of China. It contains some of the loftiest peaks like Mount Everest, Kanchenjunga, Makalu, Dhaulagiri, Cho Oyu and Annapurna. All these peaks are more than 8,000 metres high, the highest one being 8,848 metres above sea-level. The range consisting of these highest peaks is known as the *Greater Himalayas*. Even a few passes across this range are as high as 6,000 metres above sea-level.

To the south lies the Mahabharat Range. It is a part of the *Middle Himalayas*. Further south lies yet another and still lower range known as the Shivalik Range or the *Outer Himalayas*. The Valley of Kathmandu lies in Central Nepal.

Along the southern border of Nepal lies a marshy and swampy plain known as the *Tarai*. Much of it is covered with thick jungles and tall grasses. Tigers and elephants are common in the Tarai. A large part of this plain has been drained and brought under the plough.

The climate in the Tarai is warm and humid. As one proceeds northwards into the higher region, the climate becomes cold.

As a result of great variations in relief and climate, Nepal has a variety of natural vegetation. The monsoon forests with sal and teak are common beyond the grasslands of the Tarai. Further north, temperate forests with oak and maple trees are very common. Blue pine, silver fir and birch are the common coniferous trees found at higher altitude.

Economic Development

Nearly a fourth of the total area has been brought under the plough. Nearly 93 per cent of the population is engaged in agriculture. Rice is the main crop of Nepal. It also grows maize, millets, wheat and potatoes. Some cash crops like sugar-cane, jute and tobacco are also grown on a small scale. Of late, Nepal has been increasing its area under irrigation. India and Nepal together have taken up some irrigation and power projects. Important among them are the Kosi and Gandak projects.

Cows, buffaloes and sheep are the domestic animals of Nepal. The country exports a variety of animal products—ghee, cheese, butter, wool and hides.

Teak and sal provide timber which has a good market in India. Medicinal herbs and honey are the other useful forest products. Nepal is busy in exploring its mineral resources. A large number of its people are engaged in handicrafts like wood carving and ivory work. Nepal has now a few jute, sugar and paper mills, and match and cigarette factories. A large number of people visit Nepal to scale the high peaks of the Himalayas. New roads are being built in Nepal.

Population

Nepal is a land of several peoples. More numerous among them are the Gurkhas. The people of Nepal love freedom most. They are among the best soldiers in the world. A number of them serve in the Indian army. Nepali or gurkhali is the official language of Nepal. It is a language derived from Sanskrit. The people in the plains are mostly Hindus. In the high Himalayas Buddhists are more numerous. The Bhotias of northern Nepal are traders. They employ mountain-goats and yaks to carry goods in high mountains. The Sherpas of north-eastern Nepal are among the best *mountaineers* of the world.

The total population of Nepal is nearly 10 million. This gives it an average density of about 70 persons per square kilometre. Katmandu is the capital city of Nepal.

Sri Lanka or Ceylon

To the south of India lies the island country of Ceylon. It is called the 'Pearl of the East'. It suggests how beautiful the small island is.

Look at the map and find out the shortest distance between India and Ceylon. Which strait separates Ceylon from India? A line of submerged rocks and sandbanks runs between Dhanushkodi near Rameshwaram and Talaimannar in Ceylon. To some it is a *setu* or a bridge, built by Lord Rama while for others it is Adam's Bridge. In size, Ceylon is smaller than the State of West Bengal.

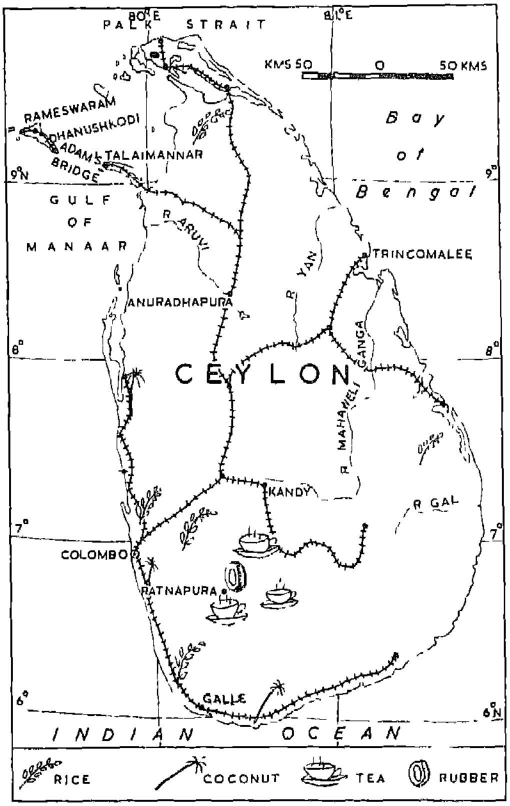


Fig. 31. Ceylon

Note the location of this island country in the Indian Ocean, in relation to international sea-routes What makes Colombo an important port?

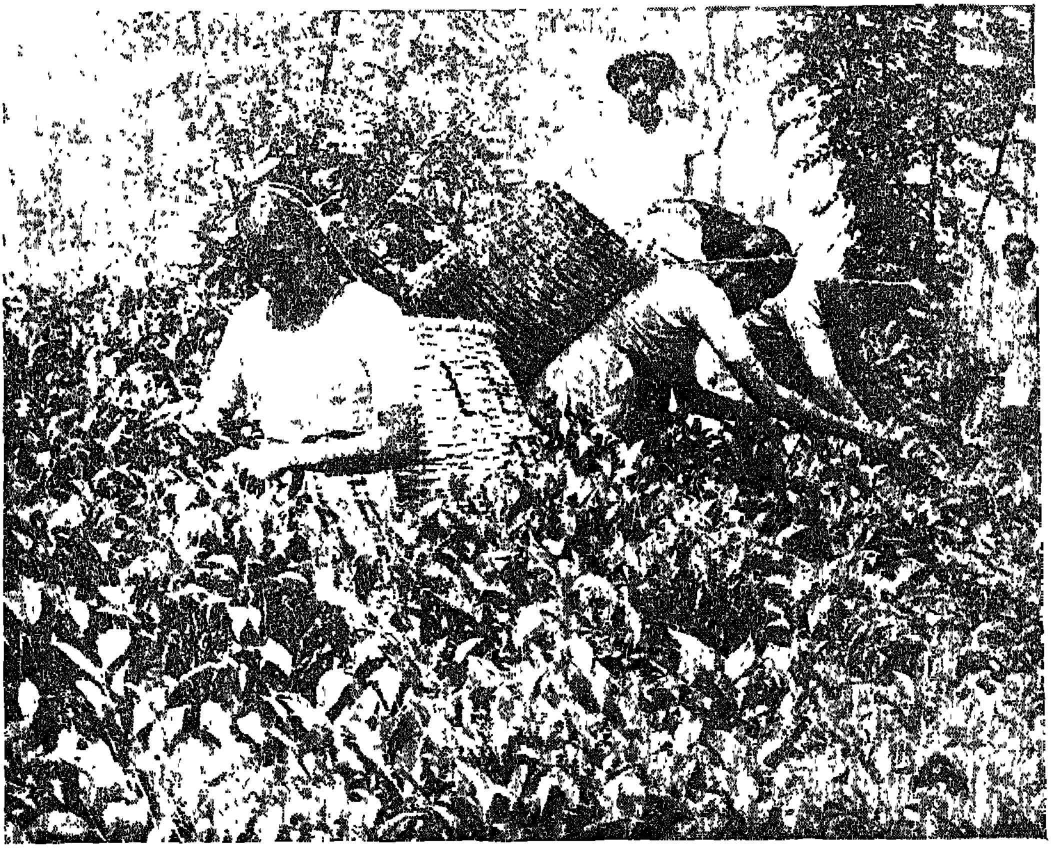
Land and Climate

The south central part of Ceylon is mountainous. The upland region is surrounded by broad coastal plains. The plain of northern Ceylon is flat and extensive. The river Mahaveli Ganga falls into Trincomalee harbour on the Bay of Bengal.

Ceylon is situated very close to the equator. Its climate is hot all through the year. The presence of the sea all around has made its climate somewhat moderate. Like India, it receives heavy rain from the south-west monsoons from May to September. It is very heavy in its southern, western and central parts. But Ceylon is a land of two rainy

XIX A Coconut Grove

These are the coconut trees along the seashore of Ceylon Note the majestic crowns of these tall trees. Do you see coconuts on the trees?



XX Plucking Tea Leaves

Look at the Ceylonese girls engrossed in plucking tender leaves of the tea plants Note the dresses of the people in this picture Where do you think are these tea gardens located?

seasons. The second rainy season lasts from November to February. This is because of the north-east monsoons, blowing across the Bay of Bengal. These winds bring rain to northern and eastern Ceylon where it is most needed. Still these plains do not receive enough rain. Several tanks and dams built in ancient times for irrigation are found in this part.

In the rainy parts equatorial and monsoon forests are common. In the arid north the vegetation is scanty.

Economic Development

Agriculture is the main occupation of Ceylon It is the basis of its prosperity. Nearly a fourth of the land is cultivated. Rice is the staple food crop of Ceylon. But it has to import nearly half of the rice it needs. It is able to do so by exporting some of its more paying crops like tea, rubber, coconut and spices. In Ceylon nearly as much land is devoted to coconut as to rice. The country exports coconuts, copra, coconut oil and cashewnuts on a large scale. There are big farms with rubber trees.

Ceylon has some of the best tea gardens of the world. They are confined to the slopes of the central highlands. Hot climate, abundant rain in frequent showers and well drained soil are ideal for a good crop of tea. The tea plant is not allowed to grow more than a metre and a quarter, because the leaves are to be hand-plucked. The Tamil women on the Ceylonese tea gardens are very skilful in plucking tea leaves. Ceylon now stands next only to India in the total production of tea. Its small home market enables it to export tea on a very large scale. Tea is the largest source of Ceylon's national income.

Graphite and precious stones are the important minerals of Ceylon. It exports graphite which is used in making lead pencils. Pearl fishing is also practised in the Gulf of Manaar for which it has been famous for a long time.

It makes coconut oil from copra and coir from coconut husk. It now manufactures tyres from rubber Its other industrial products are paper, plywood, textiles, cement, sugar and cigarettes.

People

Ceylon is a land of several peoples. The earliest inhabitants of Ceylon are Veddas. They are very few. The Sinhalese form the largest group in Ceylon. They speak Sinhale, a language derived from Sanskrit A large number of Indian people from Tamil Nadu have settled in Ceylon. They speak Tamil. Both Sinhale and Tamil are the official languages of Ceylon. The Moors or the Arabs are also in a fairly large number in south-west Ceylon. Ceylon is a land of several religions. Buddhists are by far the largest group in Ceylon. They are followed by Hindus, Muslims and Christians.

The total population of Ceylon is 11 million. This gives this land an average density of 167 persons per square kilometre. Colombo is the capital city of Ceylon. It is its largest port and a city with a population of about half a million. Kandy is a modern city and a hill station in central Ceylon. It is the centre of tea industry. Anuradhapura is a city of north Ceylon. It is a centre of the Tamilian culture. Trincomalee is the most spacious natural harbour on the Bay of Bengal. It is an important naval centre of Ceylon. Ratnapura is famous for its precious stones.

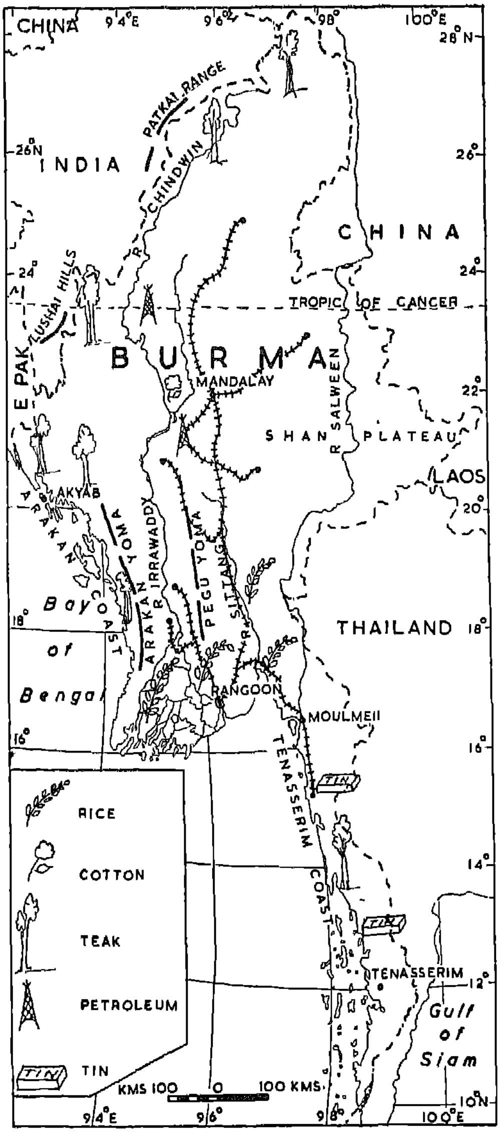


Fig. 32. Burma

Which mountain ranges separate Burma from India? Locate the towns of Rangoon and Mandalay.

Burma

Burma is yet another neighbouring country of India. It also has very close cultural ties with India. The word Burma reminds us of its beautiful pagodas, the temples dedicated to Lord Buddha. Equally interesting are its teak forests where elephants are engaged in carrying logs Burma is also famous for its rice exports.

Land and Climate

Look at the map of Burma. It is a big country with an area bigger than those of Rajasthan and Jammu and Kashmir put together. The shape of Burma reminds us of a kite with a long tail. The country has common borders with East Pakistan, India, China, Laos and Thailand.

On the west, the country is flanked by the Bay of Bengal. Look at its coastline. It possesses deep creeks, numerous off-shore islands and a series of small bays and capes. Such a highly zig-zag coastline is called an *indented coastline.* It possesses several natural harbours.

Look at the delta of the Irrawaddy.

Burma is a mountainous country. It is separated from its neighbours by high mountain ranges. They are all heavily forested. In what direction do these mountain ranges run? The Arakan Yoma separates it from India and Pakistan. The Pegu Yoma in Central Burma separates the two important valleys of the Irrawaddy and Sittang. To the east lies the Shan Plateau of very old rocks. It is drained by the Salween, a big river of eastern Burma. In the south, lies the narrow coastal belt of Tenassarim which looks like a long tail of a kite.

Burma has the monsoon type of climate. It receives rain from south-west monsoons from May to September. The amount of rainfall, however, varies from place to place. It is heaviest in Arakan Yoma, Upper Burma and in Tenassarim. The central valley of Irrawaddy receives scanty rainfall.

Mangrove forests are common in salt-water swamps along the coast. Bamboo, palms and evergreen trees are common in fresh-water swamps. The Shan Plateau has scrubs and coarse grasses. But the monsoon forests in its hilly region are the most typical of Burma.

Economic Development

About a fourth of the total area has been brought under the plough. It provides livelihood to nearly two-thirds of its total population. Rice is the main crop of Burma. It occupies nearly two-thirds of its cultivated land. Its best rice lands lie in the combined deltas of the Irrawaddy and the Sittang. Burma after meeting its own demands is often able to export nearly half of its rice produce to other Asian countries. Its other crops are pulses, maize, groundnut, cotton, tobacco and sugar-cane.

Teak stands next only to rice in the exports of Burma. It is the most useful tree of the monsoon forests. It is generally found mixed up with several other species of trees. Teak is a *deciduous* tree, shedding its leaves in the dry season. The trunk of the tree is straight and branchless. There is a dense foliage at the top of a tree. Some of the trees grow 40 to 50 metres high. The circumference of the tree becomes more than two metres by the time it is about 150 years old. It is then mature for felling.

Trained elephants are commonly used to carry these big and heavy logs. The elephant lifts them easily with its trunk. Teak is useful because it is a tough and durable wood. It does not rot in water, as it has high oil content. This also saves the iron nails put into it from rusting and getting loose. Teak is, therefore, very useful in making furniture and in building houses and ships. Burma has also some rubber plantations.

Burma is rich in its mineral resources. It possesses deposits of petroleum, tungsten, lead, zinc and tin. There are several saw mills and rice mills in the delta. Burma has also set up a few new industries.

Population and Transport

The people of Burma are called the Burmese. Most of them are Buddhists. The total population of Burma is nearly 25 million. It gives the country an over-all density of 36 persons per square kilometre. Much of the Burmese population is concentrated in the valleys of Irrawaddy and the Sittang and their deltas. Rangoon is the largest town situated 50 kilometres from the sea. It stands on the bank of the Irrawaddy and is the capital city and a large river port of Burma. Mandalay is the old capital city and a centre of Burmese culture. Moulmein and Akyab are the other port cities of Burma.

The river Irrawaddy is navigable for about 1,500 kilometres from the sea. The Chindwin and its tributary are also navigable. They are highly useful for floating logs and for carrying rice to the deltas.

The New Terms You Have Learnt: *Indented coastline*—A long and highly zig-zag coastline with alternate creeks and capes or headlands *Mountaineer*—One who scales high mountain peaks as a sport. *Deciduous trees*—A group of trees shedding their leaves at a time in the dry season.

Exercises

Review Questions

1. Answer the following questions in brief:
    - (i) *Which is the world's highest peak?*
    - (ii) *Name the two large rivers of Burma.*
    - (iii) *Which are the three major mountain ranges of the Himalayas?*
    - (iv) *What are the four major exports of Ceylon?*

2. Make out correct pairs from the two columns:
    - (a) *A land-locked country enclosed between India and China*
    - (b) *A Pearl of the East*
    - (c) *A land of pagodas*
    - (d) *The major forest wealth of Burma*
    - (e) *The leading export of Ceylon*
    - (f) *A staple food of Nepal, Ceylon and Burma*
    - (g) *The most spacious natural harbour on the Bay of Bengal*
    - (h) *An important river port*
    - (i) *The capital city of Nepal*

    - (i) *Tea*
    - (ii) *Rice*
    - (iii) *Burma*
    - (iv) *Trincomalee*
    - (v) *Ceylon*
    - (vi) *Teak*
    - (vii) *Nepal*
    - (viii) *Rangoon*
    - (ix) *Katmandu*
    - (x) *Rubber*

3. Describe a teak forest in Burma. How are logs transported? What makes teak very useful timber?

4. What are the requirements of a good tea crop? To what extent are they found in Ceylon?

5. Name the items of export from Burma and Ceylon. How do they differ from each other?

Picture Reading

6. Study Pictures X and XX. Compare the type of labour involved in harvesting dates and plucking tea leaves.

Map Work

7. Draw pictorial maps of Burma, Ceylon and Nepal showing their major agricultural and forest products.

Topic for Class Discussion

8. '*The Successful Indian Expedition to Everest*'

    Collect information and pictures on the topic. Tell the class something about the equipment used by mountaineers in scaling the high peaks.

16. Lands of Rubber and Other Plantations

The Terms You Already Know: *Harbour*—An extensive stretch of deep water where vessels can anchor safely. *Rubber estate*—A large farm planted with rubber trees

The three South-east Asian ountries with which India has close elations are Malaysia, Singapore and ndonesia. Malaysia is a land of ubber and tin. Singapore is a mall island State that lives on trade. Indonesia is a land of varied plantations. The location of the three countries is very important as they face the Indian Ocean on the one hand and the Pacific on the other.

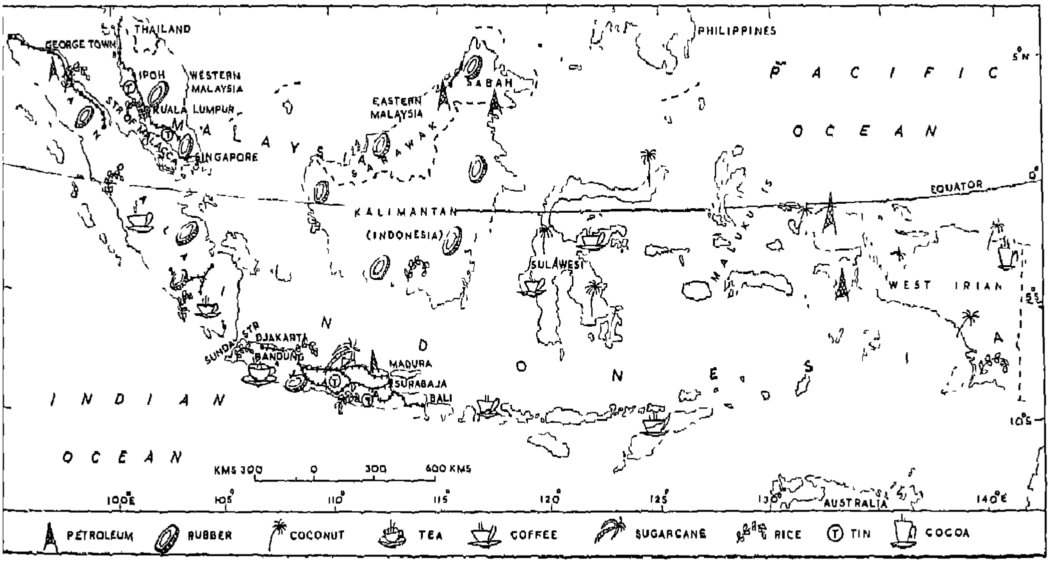


Fig. 33. Malaysia, Singapore and Indonesia

Note the locations of Malaysia, Singapore and Indonesia. Why has Singapore become the most important naval and commercial centre of the East?

Malaysia

Of the three countries, the Federation of Malaysia lies to the north, but not far from the equator. Look at Figure 33. You will find that the country is divided into two parts, known as Western Malaysia and Eastern Malaysia. Whereas the former is situated on the mainland of Asia, the latter occupies the northern part of the Borneo island. Eastern Malaysia consists of the States of Sarawak and Sabah. Western Malaysia is as large as Tamil Nadu while Eastern Malaysia is comparable to the size of Mysore State.

Look at the map and find out why the Federation of Malaysia should develop friendly relations with Thailand, Singapore, Indonesia and the Philippines?

Land and Climate

The mountain range which separates Burma from Thailand continues further south to form a narrow peninsula of Malaya. The central highlands of the peninsula are flanked by narrow coastal lowlands. The western coastland is wider of the two.

Look at the map and find out the latitudes in which Malaysia is situated, you will then know why the country enjoys a typical equatorial type of climate.

The soils in highlands are infertile. In the plains, however, they consist of fertile alluvium. Like the other equatorial regions, Malaysia is covered with thick evergreen forests. Nearly four-fifths of its land is under thick jungles. Mangrove forests are common in the swamps and muddy lowlands along the coast.

Economic Development

In spite of mountains and thick forests, nearly a sixth of the land has been brought under the plough. Agriculture is the main source of living for the bulk of the population. A large number of people are engaged in farming. They grow rice, pineapples, sweet potatoes, sago, coconuts and bananas. Rice is the staple food of the Malaysians. It is supplemented by fish. The country imports rice as its own production is inadequate.

Malaysia, however, is known not so much for its rice as it is for its rubber. Rubber trees grew wild in the Amazon basin. Its saplings were brought to Malaysia by the British about 90 years ago. Today, there are large rubber estates where rubber trees are planted in rows at a fixed interval.

XXI. A Rubber Plantation in Malaysia

Look at the man engaged in spraying insecticides on the rubber trees Note the automatic pump he has been using for spraying.

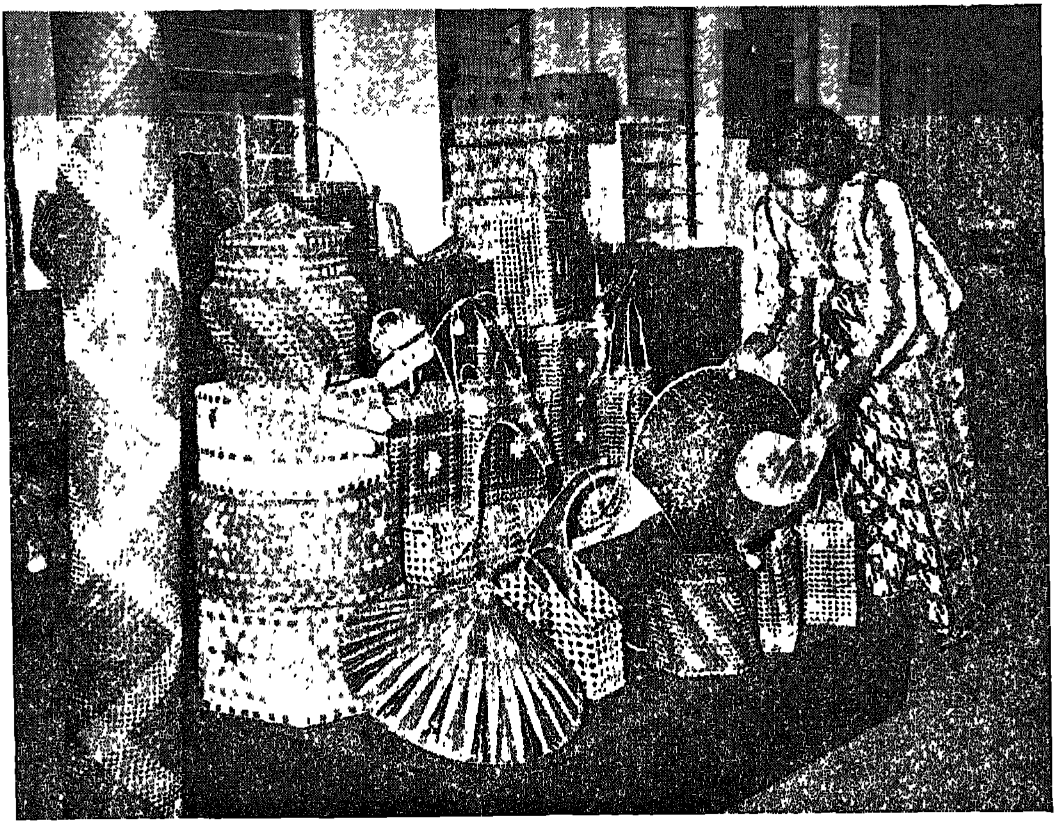
Every tree on a rubber estate is carefully looked after. One person is assigned to look after every 350 rubber trees. He cuts sloping grooves on the trunk of the tree and hangs a cup to collect the milky juice oozing out of the grooves. The white milky juice oozing out of a rubber tree is known as *latex*. The person who collects latex on a rubber estate is known as *tapper*. In Malaysia there are about 2,50,000 tappers. They are mostly Indians, migrated from Tamil Nadu. Nearly two-thirds of the total cultivated land in Malaysia is devoted to rubber.

The rubber estates are managed by big firms. They spend large amounts of money to improve the quality and quantity of crops. They also have a large marketing organization. This scientific and commercial type of farming specializing in a single crop is known as *plantation agriculture.* Malaysia today accounts for nearly a third of the world's total production of natural rubber.

Among the mineral resources of Malaysia, tin is very important. Malaysia is the world's leading producer and exporter of tin-ore. Tin is very useful for plating thin sheets of steel. Tin plates are commonly used in making containers or cans for packing food products and the like.

Population and Trade

Malaysia is a land where several peoples meet. Its original inhabitants are called Malay. They speak



XXII. Malaysian Handicrafts

A Malaysian girl is displaying local handicrafts. Look at her beautiful dress and fine workmanship. What are these articles made of?

Malay and follow Islam. The Chinese are the second largest group now settled in this land. Many of them work in mines and follow small trades. Then come Indians who work either in rubber estates or in offices.

Rubber, tin, copra, coconut oil and pine-apples are the main exports of Malaysia. Rice, tea, cotton textiles, motor vehicles and machines are its major imports. Much of its trade passes through Singapore.

Singapore

Look at the map and locate this small island country. Because of its key position it is a very important country for its small size. It stands on a narrow strait which serves as a gateway between the Indian and the Pacific Oceans.

The island possesses a spacious natural harbour. Singapore is a big naval base. It has large ship-repairing docks. It is a leading commercial centre of South-east Asia where goods from all neighbouring countries are collected for re-exporting them to distant lands. What articles do you think it must be trading in?

Singapore (Simhapura) is a name of Sanskrit origin which it received in the 13th century. Today, it is a *cosmopolitan city* where people of different nationalities live side by side. The Chinese are by far the most numerous in this city of about two million people. Indians form about eight per cent of its total population. Today it has become a busy international airport. Look at the map and find out why it is called the 'Cross-road of the East'.

Indonesia

Indonesia consists of nearly 3,000 islands. They are spread along the equator over a distance of about 5,000 kilometres from west to east. The country is, therefore, often called an 'Island Empire'. True to its name, the islands together have an area of nearly three-fifths the size of India. Indonesia is well known for its natural wealth and variations among its people from place to place.

Land and Climate

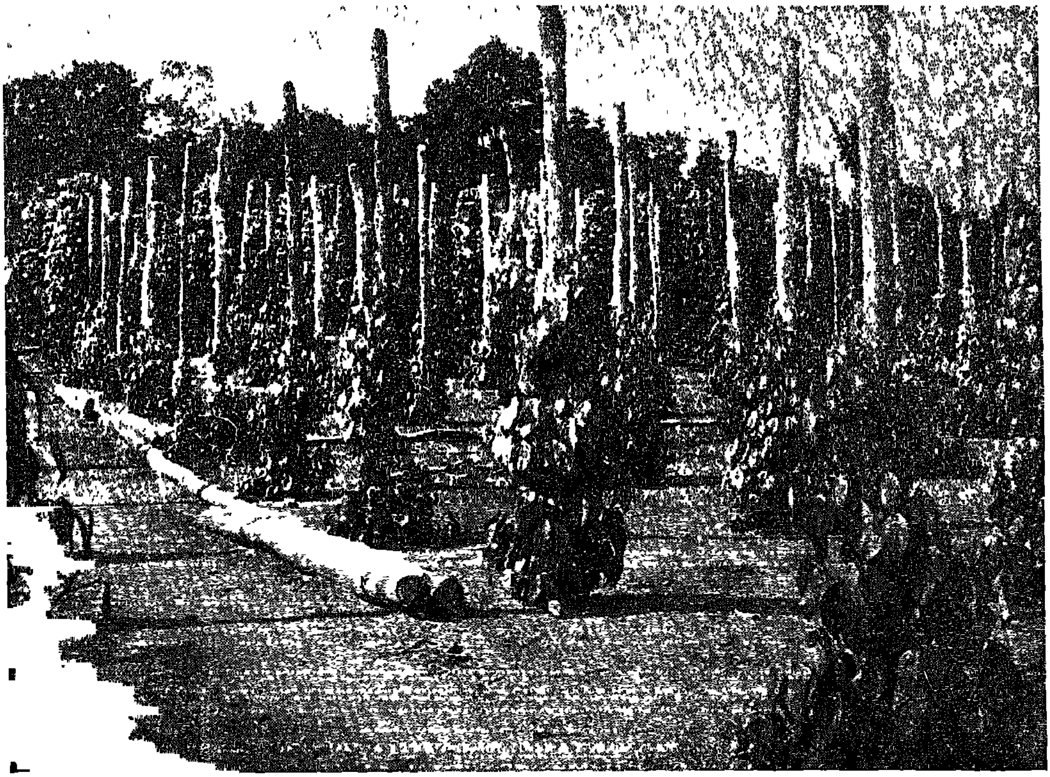
Look at Figure 33, and note the latitudes in which Indonesia is situated. Its islands are spread on either side of the equator. The prominent among them are Andalas (Sumatra), Java, Madura, Bali, Kalimantan (Borneo), Sulawesi, Maluku and West Irian.

From the map find out the sea that separates Malaysia from

Indonesia. Why is it called a strait? Name yet another strait that separates Java island from Andalas or Sumatra.

Indonesia is a mountainous land. Mountain ranges form a backbone of this chain of islands. There are numerous volcanic mountains. Krakatao is the most famous volcano of Indonesia. After its great eruption in 1883, what remains today is a small island with a lake. It is situated in the Sunda Strait. In some areas the soil in Indonesia is very fertile as it is derived from the young volcanic rocks.

As all the Indonesian islands are situated very close to the equator, they enjoy the typical equatorial type of climate. What are the special features of such a climate? Why are these islands clad with thick forests?



XXIII A Pepper Plantation

Look at the creepers of pepper and the support they need to climb up. Do you see that they are all planted in rows?

XXIV Inside the Tin Factory

Look at the dresses of men and women at work in this factory in Indonesia. Do you see the tin bars in the picture? What use would they be put to?

Economic Development

Nearly one-eighth of the total area is cultivated. But nearly three-fourths of its population is engaged in agriculture. The cultivated land is mostly confined to coastal lowlands and small river valleys. There are, however, great variations from island to island. Java is the most intensively cultivated island in Indonesia. In this island even the hill slopes are cultivated by cutting terraced fields across them.

Rice is the staple food crop of Indonesia. Nearly two-fifths of its cultivated land is devoted to rice. But it is still insufficient for its huge population. The other crops are maize, sweet potatoes, soyabeans, groundnuts, cassava, coconuts and sago.

Like Malaysia, Indonesia is also known for its plantation agriculture.

But it produces a variety of plantation crops. They are rubber, sugar-cane and tobacco in the low-lying areas and cinchona and tea in its uplands. Quinine is obtained from the bark of the cinchona tree. Indonesia is the world's largest producer of cinchona.

The country is rich in mineral resources. It possesses large deposits of tin. There are a few deposits of gold, petroleum, iron-ore, manganese and bauxite also.

Indonesia is now building up its new industries such as sugar, cement, iron and steel, glass, paper, chemicals and mineral oil. Like India, it has a wide variety of small-scale industries scattered in different parts of the country.

People

Indonesia is a land of several peoples. More numerous among them are the Javanese and the Sundanese. In the past, India had influenced the life and culture of Indonesia for a long time. The people of the Bali island are Hindus. Their dance is very close to the Bharatanatyam of South India.

The bulk of the Indonesians today are the followers of Islam. Islam was brought to these islands by the Arab and Persian traders. There are also Buddhists and Christians, besides a large number of tribal people.

Bahasa (Bhasha) Indonesia is the national language being developed in Indonesia. It is similar to the Malay language. There are a good many Sanskrit words in it. The epics of Ramayana and Mahabharata are very popular even today in parts of Indonesia.

Indonesia has a population of 103 million. But it is very unevenly distributed. Java together with the two small islands of Madura and Bali account for two-thirds of the total population. These islands have a density of about 480 persons per square kilometre, while Indonesia as a whole has an average density of 54 persons per square kilometre. Djakarta is the capital city of Indonesia. It has a population of about 3 million people. Surabaja and Bandung are the two other cities with a population of about a million each.

The New Terms You Have Learnt: *Plantation Agriculture*—Scientific and commercial type of farming specializing in a single crop *Latex*—A white milky juice of a rubber tree. *Cosmopolitan City*—A city where people of different nationalities live side by side.

Exercises

Review Questions

1. Answer the following questions in brief:
    - (i) *What is a rubber estate?*
    - (ii) *How is rubber tapped?*
    - (iii) *Why is the soil in some parts of Indonesia very fertile?*
    - (iv) *Which are the plantation crops of Indonesia?*

2. Make out the correct pairs from the two columns:

(a) *The most cosmopolitan city of South-east Asia*	(i) *Sarawak*
	(ii) *Djakarta*
(b) *The most famous volcano of Indonesia*	(iii) *Kuala Lumpur*
	(iv) *Singapore*
(c) *The capital city of the Federation of Malaysia*	(v) *Malacca*
(d) *A state belonging to eastern Malaysia*	(vi) *Krakatoa*

3. Complete the following statement by choosing the most appropriate ending:

   Malaysia is a prosperous land because
    - (a) *it is self-sufficient in food.*
    - (b) *it is the largest producer of tin.*
    - (c) *it is situated on a busy trade route.*
    - (d) *it has large plantations of rubber.*

4. Why is Singapore called the "Cross-road of the East"? Explain its commercial importance.

5. What has made rubber plantations a success in Malaysia? Write three important features of plantation agriculture.

Picture Reading

6. Look at the Pictures XXI and XXIII. What kind of agriculture do they suggest?

Map Work

7. In an outline map of Asia show the important Asian ports and the sea-routes from them leading to Singapore.

Topic for Class Discussion

8. '*Bombay versus Singapore*'

   Collect information on these two port cities in respect of their location, climate, local industries, people and items of imports and exports. See in what ways these port cities are different from each other.

17. Where One-fifth of the World Lives

The Terms You Already Know: *Gorge*—A deep river valley, with steep sides.

China is one of the largest countries of the world, and is almost three times the size of India. With nearly 650 million people, its population is the largest in the world. It means every fifth person in the world is a Chinese. Like India, China is a land of farmers. Also it is an old land with an ancient civilization. The country possesses rich and varied natural resources. It is now busy in developing its natural wealth and setting up new industries.

Look at the map of China. The country is situated between 18°N latitude and 54° N latitude from south to north. Find out its longitudes. Locate the island of Hainan in the Gulf of Tonkin. It forms the southernmost region of China. Name the countries that have common frontiers with China.

Land and Rivers

The western part of China consists of mountains, plateaus and deserts. The Kailas Range, the Kunlun, the Tien Shan, and the Nan Shan are the important mountain ranges of western China. The plateau of Tibet is the world's widest and the highest plateau. Taklamakan of Central Asia is a dreary desert of China lying north of Tibet.

Look at the map to locate several big rivers of China. From the Plateau of Tibet, the rivers Indus, Sutlej and Brahmaputra (Tsangpo) find their way into India. The Salween and the Mekong flow towards South-east Asia. The Si Kiang, the Yangtze Kiang and the Hwang Ho are the three major rivers of China flowing from west to east. They drain into the Pacific Ocean.

The Yangtze is the longest river of China, flowing through its central

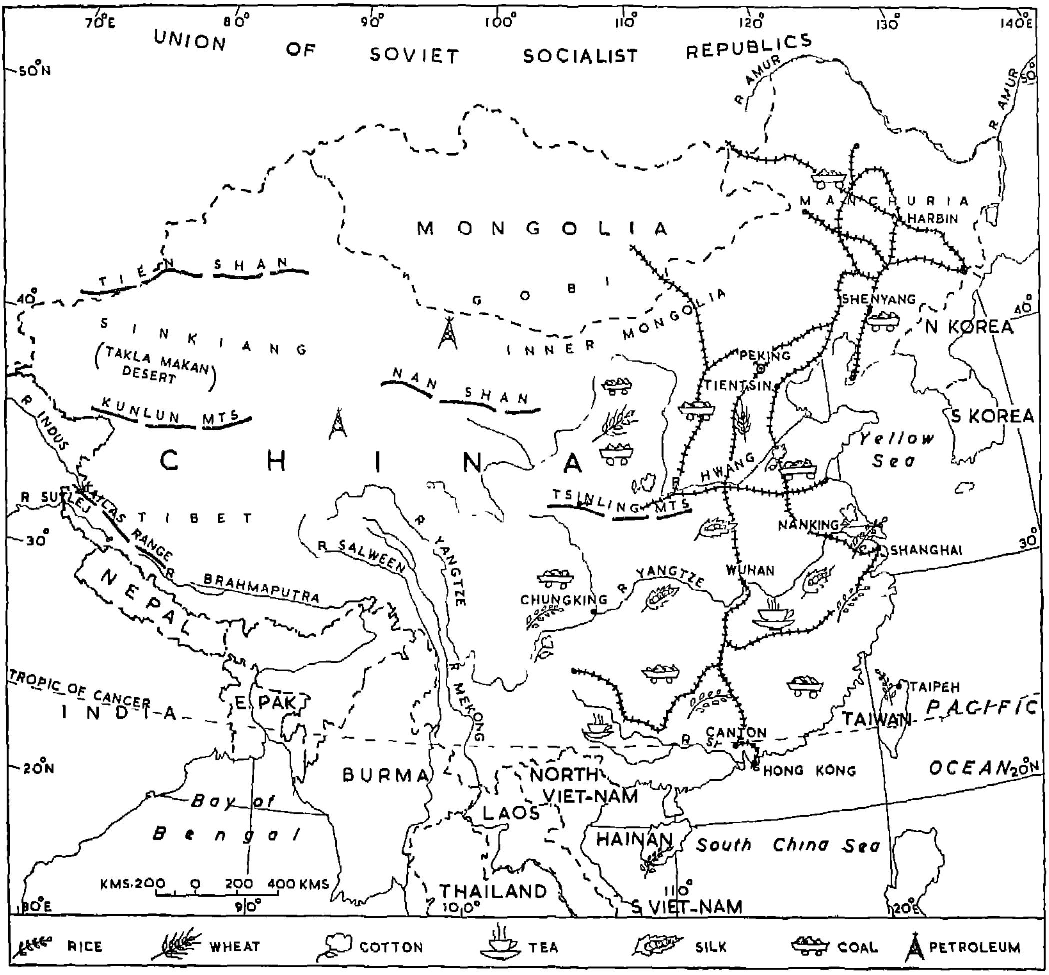


Fig. 34. China

Note that China is a land of great rivers. Most of them originate on the Plateau of Tibet. Which are the three most important rivers of China?

part. The river is known for the deep and narrow gorges through which it flows in its upper reaches. The river is highly useful for irrigation and navigation in its lower reaches.

The Hwang Ho is the river of North China. It flows through a yellow dusty plain; and carries great amounts of silt along with it. Because of the yellow silt which it carries, it is often called the Yellow River. The sea into which it falls is also known as the Yellow Sea. This river is highly useful for irrigation. As the silt gets deposited on the river bed, the flood water of the river overflows its banks causing widespread damage. Efforts are being made to control the flood water and divert it into the fields for irrigation. Large schemes to control floods and to irrigate fields are being carried out in China to tame this river. The Chinese are confident of harnessing this '*river of sorrow*' into a *tame* or well-behaved river.

Eastern China is a land of plains and hills. The Tsinling Mountains divide Eastern China into two—the north and the south.

The basin of Manchuria in the north-east is a fertile grassland. It is very thinly populated at present. The Great Plain of Northern China is made up of the silt brought down by the Yellow River and is very fertile. To its west lies a fertile plateau of very fine dust called *loess.* It is believed that the winds blowing from the interior of the Asian continent have brought this fine dust. They deposited the dust in layers one over the other.

Southern China is divided into two valleys—the valley of the Yangtze in the north and the Valley of the Si Kiang in the extreme south. The Yangtze Valley consists of the Red Basin in the west, the Central Plains in its middle course and the coastal plain in its lower reaches. The valley of Si Kiang is very narrow, bounded by hills and mountains.

Climate

The climate of China is not as hot as we find it in our country. Why is it so? But like India, China has a monsoon type of climate.

In the south and southeast the summers are hot and wet. Winters are mild and somewhat rainy. This region receives the heaviest rainfall in China In the Yangtze basin the summers are warm and rainy. Winters are cool and slightly rainy. In North China summers are fairly warm but winters are extremely cold and dry. Very cold and dry winds blow over North China in winter. The monsoon winds bring rains in summer. But the rainfall is uncertain and insufficient for crops to grow. This makes irrigation very necessary in China.

In China the monsoons blow from south-east. As they move into the interior, the rainfall begins to decrease from south to north and from east to west. The growing season in the south is all through the year but as one moves towards north it becomes less than six months in Hwang Ho valley and in Manchuria.

Economic Development

Agriculture, mining and industry are the three major activities of China.

Agriculture: China is a land of farmers who have very long experience of farming. The Chinese have been the farmers for over 4,000 years. Because of its great population and a very limited cultivable land there is a great pressure of population on agricultural land. In spite of its very big size, the area under cultivation in China is even less than that of India. In its fertile plains and river valleys almost every inch of land is tilled. Terraced fields are very common along the hillsides in China The Chinese farmer works like a gardener in his field paying individual attention to every plant. He conserves rain-water or snow very carefully to irrigate his fields. China leads the world in the total area under irrigation. The Chinese farmer also uses manures and night soil to increase the yield from his land. It is thus a land where *intensive agriculture* is practised.

With a very large population to be fed, China concentrates on cereal crops. It is the world's leading producer of rice Its average yield of rice per unit of land is higher than that of India. Rice is mainly grown in southern and central China. Tea, sugar-cane and mulberry are the other important crops of southern China. In China, tea is grown by farmers on a small scale mainly for their own consumption.

Silkworms are reared by the farmers on the leaves of mulberry trees The production of raw silk helps the farmer to supplement his income from the farm. The silkworm makes a cocoon around itself A *cocoon* is about $2\frac{1}{2}$ centimetres long and nearly 2 centimetres broad. It is made of a sticky thread ejected by the silkworm through its mouth. These cocoons are then put into boiling water and fine thread is separated and wound with great skill. The cocoon is boiled before the silkworm turns into a moth and comes out of it by tearing it up. The rearing of silkworms and production of raw silk is known as *sericulture.*

Wheat, millets and soyabeans are the leading food crops of the north. The cash crops of cotton and tobacco are grown in the Hwang Ho and Yangtze valleys. Thus China is an important producer of two fibres, cotton and silk, so necessary for clothing. In fact, China is well known from early times for its fine silks. The Chinese closely guarded the secret of silk for several centuries from the rest of the world.

Pigs, chicken and ducks are very widely reared all over China. In the arid grasslands horses, donkeys, mules, sheep, goats and camels are reared. Fishing is an important part of rice farming Rice fields are carefully stocked with fish Cattle are very scarce and dairying is insignificant in China. Even forestry is of little significance, because China as a whole has been very badly deforested. This has led to erosion of soil and repeated floods causing great damage

Mining and Industry: China has been using copper, tin, bronze, iron and coal for a long time. It has coal, tungsten and antimony in plenty. The latter two are mixed in iron to make fine steel. It has sufficient reserves of iron and tin. Its reserves of copper, sulphur and petroleum seem to be limited.

With its very rich reserves of coal and workable deposits of iron, China has developed its iron and steel industry in recent years.

It now produces heavy machinery, small machines and tools, and transport equipment. The industrial centres of China are mainly confined to Manchuria and North China.

With cotton and raw silk in plenty, China has a well developed textile industry. Shanghai is the main centre of this industry. China also produces electrical goods, chemicals, agricultural and textile machinery, paper, glass and processed foods.

Population and Transport

China is a vast land consisting of several races such as the Hans, Mongols and Tibetans. The Chinese follow the teachings of Confucius and the Buddha. The Chinese are a very industrious and proud people.

The population of China is estimated at about 650 million. It gives China an over-all density of about 70 persons per square kilometre, as against nearly 160 in India. But its population is distributed very unevenly. There are large tracts like Tibet, Sinkiang and Inner Mongolia which are very sparsely populated. As against this, certain parts like the Lower Valleys of the Yangtze, Hwang Ho, Si Kiang and the Great Plain of North China are very densely populated. In some of these areas the average density of population varies between 400 and 800 persons per square kilometre.

The means of transport in China are rather inadequate for its huge size and a very heavy population The rivers Yangtze and Hwang Ho serve as natural means of transport They are the busy *inland waterways*. The railway network is being developed as it is inadequate to meet the needs of its industries. New roads are being built in the far flung provinces of Tibet, Sinkiang and Inner Mongolia. The old "Tea Road" and "Silk Route" of west and north-west China are being modernized.

Peking is the capital city of the People's Republic of China It is to China what Delhi is to India. This historical city has a population of over four million people It has all along been a seat of Chinese culture and learning. China is a Communist country ruled by the Communist Party of China. It is, therefore, also called Red China. Shanghai is the largest port and city of China. With a population of about seven million people, it is a great textile centre It is also a centre for machine and tool industry Tienstin, Shenyang, Wuhan, Chungking and Harbin are the other industrial centres of China. Canton and Nanking are other important cities of the country.

Taiwan

The island of Taiwan lies off the coast of China It has a government of its own led by the former Chinese leader This small island country is often called Nationalist China. It has a population of over 12 million people Its main crop is rice. The island has made considerable progress in agriculture and small scale industries. Taipeh is the capital city of Taiwan and has a population of over one million.

The New Terms You Have Learnt: *Loess*—Very fine dust brought by the winds and deposited in layers one over the other *Sericulture*—rearing of silkworms and producing raw silk as a cash crop

Exercises

Review Questions

1. Answer the following questions in brief
    - (i) *Which are the three most important rivers of China?*
    - (ii) *Why was Hwang Ho called the river of sorrow?*

(iii) *What is meant by taming a river?*
(iv) *Which is the most important inland waterway of China?*

2. Make out correct pairs from the two columns:

(a)	*The river of sorrow*	(i)	*Taipei*
(b)	*A river of Southern China*	(ii)	*Tungsten*
(c)	*The longest river of China*	(iii)	*Taklamakan*
(d)	*A low desert basin*	(iv)	*Hwang Ho*
(e)	*The capital of Nationalist China*	(v)	*Si Kiang*
(f)	*The capital of the People's Republic of China*	(vi)	*Peking*
(g)	*A mineral in which China is rich*	(vii)	*Yangtze*

3. What is sericulture? Find out all that you can about why and how it is practised in China.

4. What are the important crops of China? Write three important features of farming in China

5. Why is the population in China very unevenly distributed? Give four reasons with an example in each case.

Map Work

6. In an outline map of Asia showing political divisions, name China and all its neighbouring countries in their respective places. Write the populations of each country in brackets. Label the important rivers of China.

Topic for Class Discussion

7. '*The Wall of China*'

Collect information on this topic. Answer the questions such as: Why was this wall built? How far is it useful today?

18. A Land of the Rising Sun

The Terms You Already Know: *Earthquake*—Vibrations or shakings caused in the earth's crust by sudden movements inside the earth *Terraced Farms*—Small strips of level farms cut across the hill slopes They look like giant staircases along hillsides

Japan is a small mountainous country Its natural resources are very limited, and population very large. But the industrious people are its major asset. With hard work they have made their land a very prosperous country of the world. They call their country *Nippon*, which means a 'Land of the Rising Sun'.

Japan consists of about 3,000 islands. Of these only four are large and important They are Honshu, Hokkaido, Kyushu and Shikoku in order of their size. The chain of islands, or an *archipelago*, forms an arc. It stretches for nearly 2,400 kilometres, off the east coast of Asia. Find out the latitudes in which they are situated.

In area, Japan is smaller than Madhya Pradesh.

Land

Mountains form the backbone of the entire archipelago. There are only a few patches of lowlands here and there in this land of hills, plateaus and narrow river valleys. The Kwanto plain on the eastern coast of Honshu is the important plain of Japan. Look at the map and locate the cities of Tokyo and Yokohama on this plain.

Japan is said to be the land of volcanoes and earthquakes. Many of its mountains are volcanic. Prominent among them is Mount Fujiyama. Mt. Fuji is a symbol of Japan's natural beauty It is held in great reverence by the Japanese people. Since 1707, Mt. Fuji has been inactive. It is, therefore, called a *dormant volcano* Locate this mountain on the map (Fig. 35).

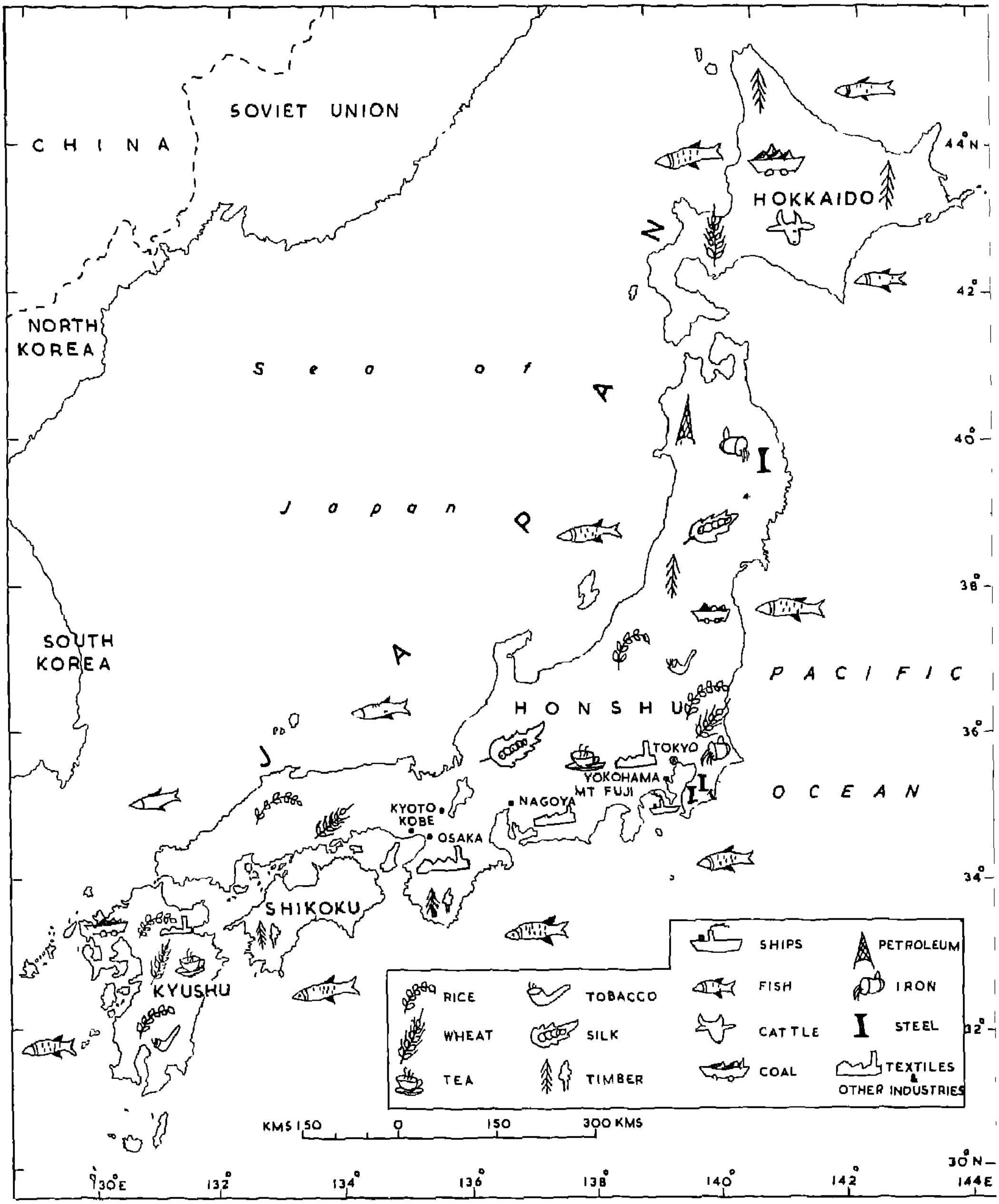


Fig. 35 Japan—Crops and Major Industries

Note more than one-sixth of the total area of Japan is cultivated. But its prosperity is now largely due to its various industries. What are they?

Earthquakes are very common in Japan. On an average two or three earthquake shocks are felt everyday. Some of the earthquakes cause terrible loss of life and property. In 1923, an earthquake followed by widespread fire caused great havoc in Tokyo and Yokohama. Several thousand people lost their lives.

The coastline of Japan is highly indented with big headlands and narrow bays. As a result Japan possesses numerous natural harbours. They have been useful for its shipping and fishing industries.

Climate

In winter the cold Siberian winds blow over Japan from north-west. They cause heavy snow and rain in the northern and western parts of the country. The climate of Hokkaido and northern Honshu is colder than what it is in southern Japan. The cold currents of the Okhotsk and the Oya Shio also make the climate of the north very cold.

The southeastern monsoons blowing towards the mainland of Asia bring summer rains to Japan. They cause plentiful rain in southern and eastern parts. The climate here is warm and humid. The warm Kuro Shio Current also helps in warming up the climate of this region. The southern parts of Japan are frequented by violent tropical rain-storms known as *typhoons*. They cause great damage to human life, crops and property.

The ocean currents influence the climate of Japan profoundly. The mingling of waters of cold and warm currents cause thick fog. These currents also bring food for fish. It helps to develop productive fishing grounds, also known as *fisheries*.

Economic Development

Farms, forests and fisheries are the major natural resources of Japan. Agriculture, forestry and fishing are, therefore, the three important economic activities of rural Japan. Japan is poor in mineral resources but abundant are its water-power resources. Today, the modern industries are most important in Japan.

Agriculture: With most of its land being very rugged and uneven, Japan has only one-sixth of its total area under cultivation. Nearly a third of its population is engaged in agriculture. Japan has a great pressure of population on its cultivated land.

The average size of a farm is less than a hectare. Each plot is intensively cultivated. Every bit of

XXV Terraced Fields in Japan

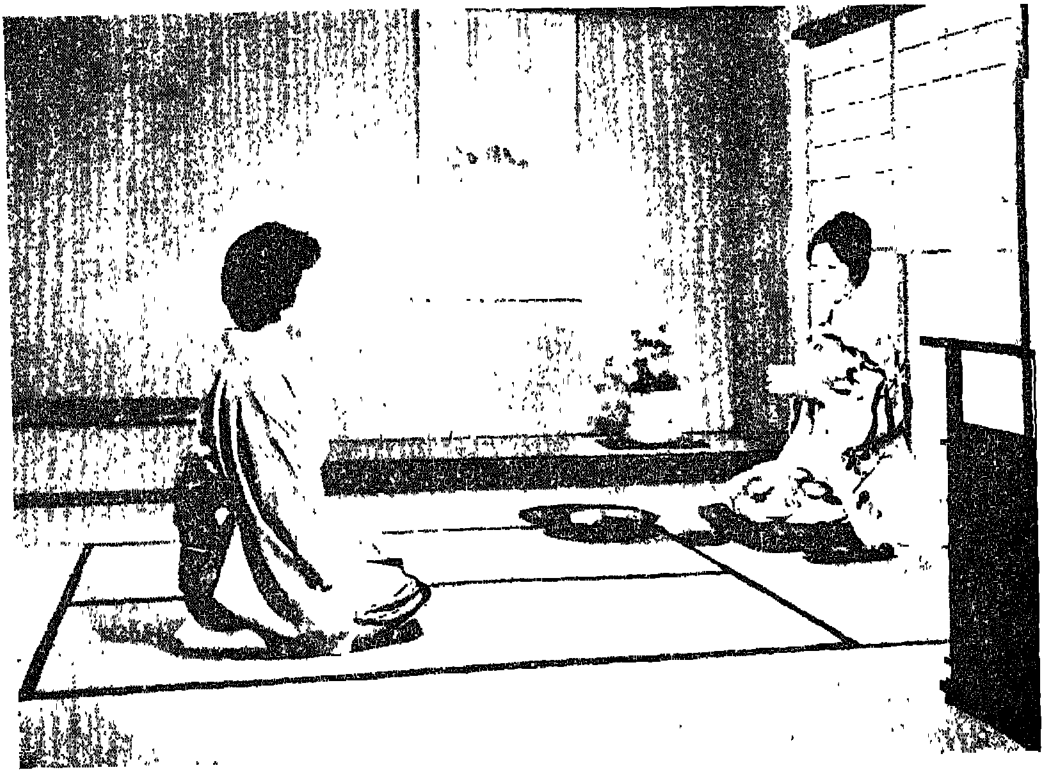
Note the snow with which farms are covered In what way would the snow be found useful by the farmer? Can you guess the climate of this region?

land suitable for farming is put under crops. Even hillsides are brought under cultivation through terraced farms. Manures and fertilizers are very widely used. As a result, the Japanese farmer is able to get high yields from his farm. The Japanese farmer uses a small mechanical tiller. He uses handy machines and tools specially designed for his small fields. In Hokkaido, however, the farms are fairly big, and the large machines like tractors are widely used.

Rice is the staple food crop of Japan. It is grown on about half the cultivated land. Wheat, barley and oats are the other important cereals of Japan. Soyabeans, potatoes and vegetables are also widely grown. Mulberry and tea are the two cash crops of Japan. Mulberry leaves are used for raising silkworms. Japan leads the world in the production of raw silk. The Japanese are fond of tea and have a special tea ceremony known as *Cha-no-yu*.

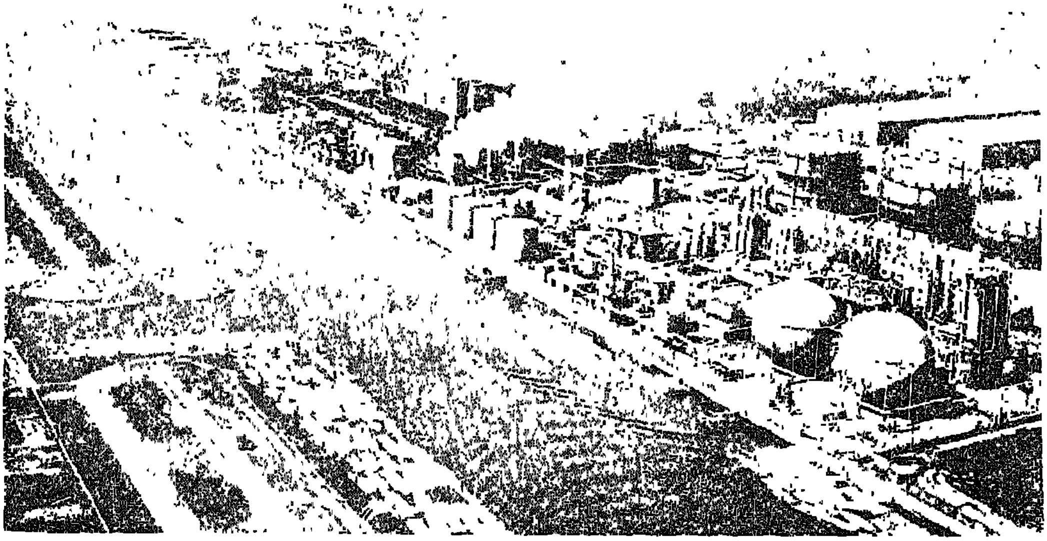
Forestry: Nearly two-thirds of the total area of Japan is forested. The forests of Japan provide timber, fuel and paper-pulp Japan still imports these products to meet the demands of its industries. Some of the forest areas of Japan have been reserved for sports and recreation.

Fisheries: The waters surrounding Japan abound in fish. The indented coastline provides numerous natural harbours. The Japanese people are



XXVI. Inside a Japanese House

Note the cleanliness and simplicity of a Japanese house. Do you see a beautiful flower pot and the curtain in the picture? The woman sitting by the side of a wall is a guest What makes you think so? How do you think are the guests received in a Japanese house?



XXVII An Industrial District of Tokyo

Look at the port of Tokyo and its industrial district. Do you see a harbour and an oil refinery in the picture? Also note the timber floating in water

adventurous by nature. As a result they are among the world's best fishermen About a fifth of the working population of Japan is engaged in fishing. Fish is second only to rice as food. The fish-catch is so large that Japan is able to export much of its catch and fish products.

Minerals and Water-power: Japan is very poor in mineral resources. The country possesses some copper deposits and a little coal and oil. But it is rich in water-power. Japan has small but torrential rivers, well fed by plentiful rains. Even this water-power is not enough to meet the growing requirements of its industries, and so the country depends largely on thermal electricity.

Industries In spite of the paucity of mineral resources and raw materials, Japan is a highly industrialized country. The people of Japan live and prosper by the manufacture of finished goods and their exports Iron and steel, ship-building, textiles, chemicals, electronics and paper are its principal industries. It now leads the world in shipbuilding and the export of ships. Television and radio sets, transistors, cameras, optical instruments, pottery, toys and synthetic textiles of Japan find world wide market The manufactured goods of Japan are generally found cheaper than those of several other countries.

People

Japan is one of the very densely populated countries of the world. Its total population has crossed the hundred million mark The average density of population in Japan is 262 persons per square kilometre as against 160 in India. They are now trying with success to limit the growth of population Most of the Japanese are Buddhists, and have a great regard for their ancestors The Japanese have a great aesthetic sense They are fond of flowers and natural beauty They are good at painting. They also have a liking for sports

More than half of the people in Japan live in cities. There are seven cities each with a population

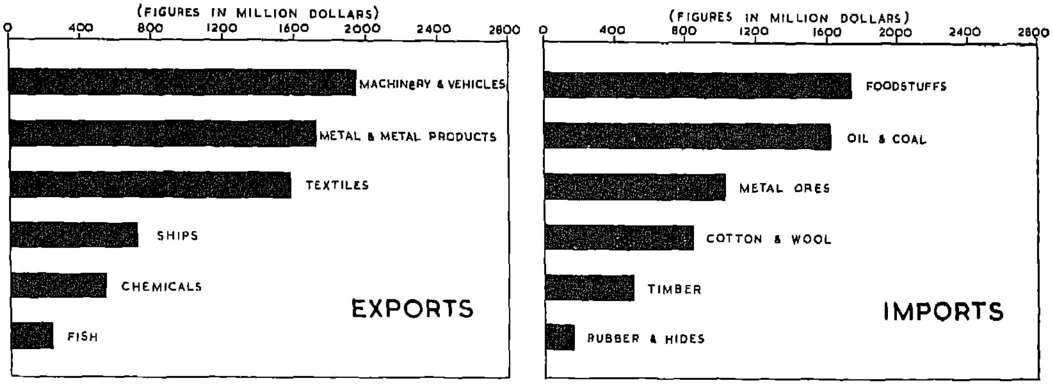


Fig 36. Exports and Imports of Japan

Note that Japan's principal exports are based on imported minerals and raw materials. Name the three important imported raw materials and the finished products into which they are converted for export of over a million. Tokyo, with a population of more than nine million is the capital city of Japan Today it is the largest city of the world It is a big industrial and commercial centre of Japan Osaka is its largest textile centre. Kobe and Nagasaki are the centres of its ship-building industry Yokohama is another manufacturing centre and the largest port of Japan

Trade

Japan depends on international trade for its very existence and prosperity.

Japan imports food stuffs such as wheat, soyabeans, corn and sugar It has also to import minerals and metals like crude oil, iron-ore and pig-iron. Even the raw materials like cotton, wool and timber are imported by it. In order to pay for its imports it processes raw materials and turns them into finished products for export. Which are they? What lesson do you think can we learn from this small but a prosperous Asian country?

The New Terms You Have Learnt: *Archipelago* -A chain of islands *Dormant Volcano*—A volcano which has been inactive for a considerable time in the past. *Typhoon*—Violent tropical rainstorms originating in East China Sea *Fisheries*—Act of catching fish and other animal life from water on a large scale Also refers to places where large number of fish are found and caught

Exercises

Review Questions

1. Answer the following questions in brief:
   (i) *Which is the largest island of Japan?*
   (ii) *Why is fishing very important in Japan?*
   (iii) *Name the three important natural resources of Japan*

2. Distinguish between:
   (i) *a warm current and a cold current.*
   (ii) *an active volcano and a dormant volcano.*

3. Complete the following statement with the most appropriate ending:

   To-day the prosperity of Japan depends upon

   (a) *its very high agricultural yields.*
   (b) *its highly developed fishing industry.*
   (c) *its large industries and trade.*
   (d) *its varied natural resources*

4. Describe how the climate of Japan is largely influenced by winds, and ocean currents.

5. State four factors explaining how they have made Japan the leading industrial nation of the world.

Picture Reading

6. Study a picture of terraced farms in Japan and find out how it helps in conserving soil and water.

Map and Graph Work

7. Study carefully the diagram showing imports and exports of Japan; and answer the following questions:

   (i) *Which are the three leading items of the Japanese exports?*
   (ii) *Which are the important agricultural raw materials imported by Japan?*
   (iii) *Which item of export does not depend on imports?*

Topic for Class Discussion

8. *'Farming in Japan versus Farming in India'*

   Find out information about the farming practices in the two countries; and point out how they differ from each other.